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**AN UNUSUAL BLOODY TUMOR BEHIND THE
UTERUS.**

By PROF. WM. H. BYFORD.

[Clinical Lecture held at the Mercy Hospital, Oct. 23, 1876. Reported by Chas. A. Palmer, M. D.]

The patient I present to you to-day is Mrs. E. H. McC., aged 35 years, from the country. She is a small woman, of highly nervous temperament, with a history warranting the belief that she has for several years been suffering from some affection of the pelvic organs. She is the mother of several children, and her labors have not been attended with any unusual features, but from these, in consequence of a delicate constitution, she has always rallied slowly. Her menses are usually regular, but somewhat profuse, and attended with a sense of weight. She has most of the time leucorrhœa and more or less backache, but is able most of the time to attend to her household duties, which are sometimes arduous. She menstruated about the first of June last in what she considers a regular manner. She saw no bloody discharge again for five weeks, when she had a slight discharge that continued a much shorter time than usual. In about five weeks thereafter, she

had a more profuse discharge, and with it pains resembling those attendant upon uterine contractions.

Since that time—which was early in September—there has been a pretty constant bloody discharge, sometimes quite free, but usually only moderate in quantity.

About the first of August her family physician examined her per vaginam, and believed she had retroversion of the uterus, and prescribed for her according to this supposition. He made another examination about the middle of September, and still considered the case one of retroversion. The first of October, after making another examination, he diagnosed a retro-uterine tumor; and about the middle of October he assured himself that it had grown to be much larger than at the last examination, and advised her to visit Chicago for further examination and counsel.

The patient informs me that, she experienced considerable nausea during the first three months, subsequent to the commencement of her menstrual irregularity. Within the last week she thinks she has felt motion similar to those experienced in her former pregnancies, and believes herself now pregnant.

Although she suffers some inconvenience from pressure upon the rectum and bladder, she is otherwise in the enjoyment of her usual health.

I examined her day before yesterday, and again yesterday, with my colleague, Dr. Roler.

The uterus is enlarged, pressed forward against the pubic bone, extends about two inches above the symphysis, and occupies the median line. The uterine sound was easily introduced into it three inches and a half. Behind the uterus and arising fully two inches above it, is a tumor with a deep and well-marked sulcus between it and the posterior wall of that organ. The tumor is tense, elastic, and as felt through the abdominal walls, regularly globular in shape.

Through the vagina the finger detects a very tense tumor strongly distending the *cul de sac* of Douglas. It is very prominent, pressing the posterior wall of the vagina forward beyond the cervix of the displaced uterus, and extending within an inch of the vaginal orifice.

Percussion of the abdominal tumor imparts a very distinct sense of fluctuation to the finger, placed upon the vaginal tumor. This effect of bimanual exploration assures us that both hands touch portions of the same tumor, and that the contents of it are at least partly fluid in their character. When the uterus is moved, the motion is imparted to the tumor and vice versa. There is no resonance upon percussion over any of the abdominal parts of the tumor. By auscultation no sound is heard except in the immediate neighborhood of the sulcus, between the tumor and the uterus, where a very fine arterial *bruit* is distinctly perceptible.

If we now sum up our observations, gentlemen, we find this much definitely made out; viz., there is a rapidly growing tumor, containing fluid occupying and strongly distending the retro-vaginal peritoneal *cul de sac*, extending into the abdomen more than half way from the pubes to the umbilicus, *moving* with the uterus, a fine arterial *bruit* between it and the uterus, and that in the person of an intelligent, observing woman who has borne children, who declares she feels foetal movements in the tumor and believes herself pregnant.

In the absence of the true placental murmur, the sounds of the foetal heart and the insignificant signs derived from ballottement the diagnosis is very obscure, and requires further exploration to determine.

As the tumor is growing rapidly and has begun to cause inconvenience from pressure upon the bladder and rectum, I deem it best to open it through the posterior wall of the vagina, and, if possible, remove it, or if this proves to be impracticable, to evacuate its contents and take measures to obliterate its cavity.

After being anæsthetized by ether, the patient was brought into the amphitheatre, placed upon the table on her left side, the vagina distended by Sims' speculum, and the operation was performed in the following manner; viz., commencing half an inch below the junction of the vagina and posterior surface of the cervix, an opening was made by the galvanocautery knife in the median line of the posterior wall of the vagina, one inch and a half in length.

As soon as the sac was perforated there escaped a large quantity of maroon-colored fluid, when the tumor collapsed, so that the whole internal surface of the cyst could be easily reached by the finger introduced through the wound. Thus examined, the inner surface seemed irregular and the wall of the cyst firm and resisting.

The discharge having entirely ceased, the patient was about to be sent to her room, when Dr. Roler placed his hand above the symphysis, and manipulated with a view to ascertain the condition of the abdominal portion of the tumor.

This manœuvre, although performed with gentleness, started up an active arterial hemorrhage. An examination made it quite evident that the flow came from a source located high up in the cavity of the sac, and not from the divided edges of the vaginal wall, which was in fact firmly consolidated from the effects of heat. With a view to check it, a mixture of Monsel's solution of the persulphate of iron, one part to two of water, was thrown through a long tube into the cavity, so as to reach the more remote part of the cyst. This, however, failed to produce any effect upon the hemorrhage. The whole cavity was then filled with pellets of cotton-wool, half as large as a hen's egg, saturated with the same mixture. Each piece of cotton was secured by twine so that it might be easily removed. It was not until the sac was entirely filled and firmly packed with this prepared cotton, that the bleeding was arrested. By this time the pulse of the patient was decidedly affected by the loss of blood.

After the patient was removed from the table, the lecturer proceeded to say: The results of this operation are somewhat surprising. I had not expected to find this tumor filled with fluid blood, much less to encounter such formidable hemorrhage.

Now what is this tumor? By the light shed upon this question in the operation, notwithstanding it was filled with blood, this tumor cannot be regarded as an ordinary retro-uterine hematocele. The following, among other reasons, seem to me sufficient to justify this conclusion: 1st, It was a *growing* tumor, and I believe it had been steadily increasing in

size for over four months. 2d, It moved with the uterus. 3d, It was filled with fluid blood. 4th, An arterial *bruit* could be distinctly heard. 5th, It bled actively after it was opened. 6th, The sac was firm and elastic, as proven by the resistance to the finger introduced for the purposes of exploration, after the evacuation of the fluid and the firm packing with the cotton.

By contrasting these with the conditions observed in the ordinary intra-peritoneal hematocele, we may better appreciate the significance of these propositions.

The hematocele attains its full size in a very few days. If it reaches above the uterus, it covers and surrounds that organ, is not elastic but doughy and soft; is not so well defined in its upper boundary, is not wholly movable with the uterus as this tumor was; there is no arterial *bruit*, and it is attended with much more local suffering. Again, if we puncture an hematocele several days after its formation, there issues reddish serum, and the finger introduced into its cavity meets with clots of more or less firmness, corresponding to the length of time after the effusion has taken place. Sometimes these coagula adhere so tenaciously to the walls of the adventitious cyst, that it is difficult, if not impracticable, to completely remove them.

These reasons seem to me sufficient for removing the tumor under consideration from the category of hematocele, as the term is usually considered. Then the question recurs, what is the nature of this tumor and in what tissues is it located? In answering this question, let me draw your attention to the fact pointed out by anatomists, that there is quite a considerable amount of connective tissue richly supplied with blood vessels, situated between the peritoneum and posterior part of the cervix, and extending upward somewhat on the body of the uterus, and slightly downward on the posterior wall of the vagina. I believe this is the locality of the sanguineous effusion. If we suppose that an artery passing through this mass of connective tissue, had given way and continued to inject its blood into it, we have sufficient cause for the commencement of the tumor. After this has taken place, the pressure exerted

by the vis a tergo of the circulation would further distend the artificial cavity, until it might assume the formidable dimensions and present all the phenomena observed in the case before us. It might in fact become a false aneurism, and the enveloping tissues be hypertrophied to a degree corresponding to the resistance and density of this cyst. This attachment would readily account for the fact that the tumor moved with the uterus. This theory of its origin would also enable us to explain why the hemorrhage succeeded the evacuation of the contents of the tumor.

I cannot call to mind any other condition of things, by which all the circumstances attending its growth and evacuation could be intelligently accounted for.

Believing the reader would be interested in the subsequent history of the case, the reporter subjoins a brief transcript, or rather summary, of his notes after the operation. During the first twenty-four hours, two of the pieces of cotton were removed, at the end of forty-eight hours all the remaining portion of the tampon was withdrawn. This was easily accomplished by traction upon the pieces of twine attached to the several pellets of cotton. No bleeding succeeded this removal, and not the least odor could be detected, so that the iron acted both as a perfect hemostatic and disinfectant. The first and second days, the vagina was well washed out by carbolized water, and afterward the cavity of the cyst was cleansed three or four times daily by conducting the same fluid into its deepest recess by an elastic male catheter. The other treatment consisted in drawing off the urine every six hours for three or four days, giving morphia sufficient to subdue pain and administering nutritious diet. The patient recovered without any untoward symptom, and was discharged on the 15th of November, sufficiently restored to make a journey of one hundred miles to her home, five miles of which were in a carriage.

Two weeks after leaving the hospital, her husband wrote to say that Mrs. Mc. was again quite well.

PREPUTIAL STENOSIS—ITS POSSIBLE COMPLICATIONS AND CONSEQUENCES..

By JAMES NEVINS HYDE, A. M., M. D.

The preputial orifice, when affected with stenosis, relative or absolute, may produce most of the conditions recognized under the names, phimosis and paraphimosis. From complete preputial atresia to slight contraction of the opening, there are various degrees of deformity which correspond, if not in an anatomical, at least in a genetic sense, to the various forms of imperforate, circular and contracted hymen in the female. The prepuce of every male infant is at birth normally in a condition of phimosis; and the question whether or not this condition will eventually result in an abnormal relation of the parts, depends upon the question whether the future development of the glans penis and its investing sac, will be proportionate or disproportionate. According to Van Buren and Keyes,¹ whenever retraction of the prepuce of an infant will permit the glans to be seen, no anxiety need be felt respecting the condition of the parts at puberty.

The recent publication of several papers containing reports of interesting cases, in which phimosis was a prominent element, has directed the attention of the profession anew, to the necessity of correctly estimating the etiological value of this deformity. I have concluded in these pages, therefore, to present a brief digest of some of the interesting features of such cases, without claiming that the instruction which they convey, is either specially new or original.

The direct local results of narrowing of the preputial orifice, differ somewhat according as full retraction is, or is not, possible. In the former case, ablution of the parts is practicable, and thus one source of trouble is removed; still, both conditions may be followed by similar consequences. In adults,

¹ Surgical Diseases of the Genito-Urinary Organs, etc., N. Y. 1864 page 13.

where retraction is possible, though slightly painful, the muco-cutaneous opening being more or less tightly stretched as the glans is squeezed through it; the most obvious effects are noticeable upon the ring itself. Here first arise the excoriations, often mistaken for venereal lesions, which may be followed by cicatrization, merely serving to render the ring still less extensible. In this way is often laid the foundation for a severe, obstinately recurring attack of herpes progenialis, or preputialis—a disease which, when fully developed, is as capable of making life utterly miserable as the aggravated forms of eczema ani.

Less obvious is the interference with the development of the penis, which invariably follows. I am quite convinced, from careful observation of many cases, that even the power to fully retract the prepuce does not satisfy the necessities of the organ. For, if the constricting ring be temporarily withdrawn behind the corona glandis, in such individuals, it is speedily followed by a sense of discomfort, and returned to its former position. The glans, then, from childhood to puberty, is compelled to accomplish its development with a membranous hood firmly embracing it—often as firmly as a glove finger, the phalanx. The glans becomes dwarfed, and, as a matter of fact, the size of the body of the penis is proportioned to the size of the glans. Apart from the inconvenience resulting from the irritability of the tender mucous surfaces, thus constantly covered, a grave consequence, and one worthy of consideration, is the mental and moral effect of this deformity upon the individual thus situated. The utterly morbid sensibility of such patients, is only equalled by the condition of hypochondriasis, which accompanies true spermatorrhœa. The following case illustrates this point:

CASE I. E. J., a healthy young man, 22 years of age, five feet eight inches in height, well proportioned, and with finely developed limbs and testes, presented himself for advice in May, 1872, on account of the size of his penis. When flaccid, the organ was but two inches in length, and in circumference no larger than the little finger of a hand of average size. The prepuce could be retracted, but with great difficulty. Upon attempting intercourse, two years before, he had been rallied by his companion upon the diminutiveness of the organ, and since then had been almost

constantly brooding over the misfortune, till his mental condition had completely unfitted him for his services as a book-keeper. Circumcision was practiced the following week, and in three months the organ had quite doubled in size.

The best evidence as to the controlling effect of the prepuce in such cases, is the marked and speedy increase in the size of the penis, after the constriction has been, by any method relieved.

When retraction is impossible, the direct consequences are well known to all who have had much experience in the treatment of disorders of the male genital organs. These are, in the infant, "ballooning" of the preputial sac, during micturition, the urine accumulating more rapidly from the opening in the glans than it can escape from the preputial outlet, and collection of sebum which becomes in some cases as hard as the rind of cheese. This collection resembles the hardened vernix in the vagina and cervix of some female children. Subsequently, balanitis, thickening of the mucous membrane, agglutination of the mucous surfaces of the glans and prepuce, suppurative inflammation, vegetations, saline incrustations, preputial calculus, development of parasites, and other complications may arise. The connective tissue of the foreskin soon becomes infiltrated with serum, upon the absorption of which hyperplasia supervenes, and the prepuce becomes inelastic and indurated, or boggy and swollen. In the adult, of course, these same conditions obtain, and are often complicated with chancre, chancroid, gonorrhea, specific balanitis, and lesions of secondary syphilis, such as condylomata, transformed chancres (Fournier), mucous patches, and other syphilides. No small source of trouble in the adult is the consequent soiling of the clothing during micturition. The accumulated urine in the preputial cavity, escapes from its orifice in several contorted streams, whose direction cannot be sufficiently calculated upon to save the clothing, and the consequent inevitable urinous odor which escapes from the person. According to Gross, carcinoma of the penis and prepuce does not result;¹ though Mr. Colles, of Dublin,² says upon this point:

1. *System of Surgery*, Phil. 1872, p. 874.

2. *Diagnosis and Treatment of Cancer*, London, 1864, p. 251.

"No warty growth upon the prepuce should be neglected in any man of middle age."

It is, however, to the indirect consequences of preputial stenosis that I desire to call especial attention, as the induced phenomena are fully as interesting to the physician as the surgeon. These secondary effects are the result of what is now well recognized as "reflex irritation," and, although authors are not wanting to dispute the sequence of events thus named, still the testimony opposed to their reasoning is almost overwhelming.

The following is a condensed statement of a report made to the Thirtieth Annual Convention of the Ohio State Medical Society, by C. E. Beardsley, M. D., of Ottawa, entitled "Phymosal Paraplegia:"

CASE II. A tall lad, 14 years of age, with dark hair and eyes, extremely emaciated, had loss of power in the lower extremities, inability to hold the head or vertebral column erect, and also suffered from epileptiform convulsions. The latter could be occasioned by pronouncing the word spasm or fit in his presence, or by concussion of the hands, and this as often as he could be aroused from the stupor which followed each attack. He had been thrown from a horse a year before the occurrence of the convulsions, and to this accident the disorder was attributed. The boy was semi-idiotic, with complete paralysis of the lower extremities.

Beardsley observed dribbling of the urine and partial erection of the penis during one convulsion, which attracted his attention to the genitals. The prepuce was non-retractable, the orifice very small, and behind the corona glandis could be felt a ring of some dense substance. There was slight balanitis and adhesion of the mucous surfaces. Circumcision was performed, the mucous membrane torn back, and a ring of dense sebum removed, as hard as ordinary cheese-crust. Recovery was in all respects satisfactory, the young man becoming finally a perfect model of health and strength.

CASE III. A child, 7 years of age, had convulsions, followed in less than ten months by complete paralysis of the lower extremities, being unable to support the body on the limbs, or to move the latter. As the convulsions occurred at night on micturition, the genitals were examined, the foreskin found adherent, and signs of recent inflammation were distinct. Circumcision, removal of pent-up sebum, and rapid recovery followed.

CASE IV. A 10-year-old child had complete paralysis of both lower extremities, convulsions, loss of vision, emaciation and inability to lift the head from the pillow or support the body; he gradually had become idiotic. For three years epileptiform convulsions occurred, upon an average once in three hours. Then followed circumcision, with liberation of a semi-solid ring of sebaceous matter, and rapid recovery so far as the ability to sit up and walk about. Vision, however, (one month prior to the date of report), had scarcely improved.

CASE V. A child, 12 months old, had double internal strabismus, continued rolling motion of head, convulsions, and distinct paraplegia, not so well marked, however, as in the preceding cases. The head could not be supported on the trunk. The epileptiform convulsions were contemporaneous with micturition. An adherent foreskin was excised with the effect of rapid restoration of health and entire cessation of convulsions. Child still under treatment (at date of report) and squinting merely.

In considering cases of this character, a natural surprise is awakened, not so much by the induced phenomena, as by the fact that the trifling cause of diseases so grave in their features and portent, should not more frequently escape all recognition. But yet it is at the portals of the human body that its sentries are stationed—not within its inner chambers. And of all these sentinels, that posted at the sally-port of the external genitals, is the most alert and importunate.

It is unnecessary, in this connection, to cite cases where incontinence of urine—diurnal as well as nocturnal enuresis—has originated in preputial irritation—Trousseau,¹ Black, Pitha, Bryant, Packard, Sweigger-Seidel, and in fact almost every author who has contributed to the literature of the subject, have reported instances of the kind. Their history is, in general, the same, beginning with scolding and whipping, drugging for worms, kidney and bladder complaints, yet always the same continual wetting of bed and body clothing, until finally the surgical character of the disease is recognized. Surely in the light of these facts it becomes the duty of every practitioner who discovers a wet napkin upon a male child over one year old, to enquire as to the cause. Dr. J. H. Pooley has recently published an excellent lecture upon this subject, entitled "Points in the Surgery of Childhood,"² in

¹ Gazette des Hopitaux, No. 9, 1860.

² A Series of American Clinical Lectures. Vol. II., No. 9.

which he directs special attention to the subject of nocturnal incontinence. In one of his cases, stillicidium occurred from an overcharged bladder, the distended preputial sac depending from the end of the penis in a semi-transparent bag as large as a hen's egg, "presenting a most astonishing sight, and giving rise to severe pain."

It is, however, quite necessary here to insert the caution, not to conclude that because preputial difficulty may induce nocturnal enuresis, that therefore all nocturnal enuresis is of preputial origin. This is far from being the case, for it is hardly necessary to state that nocturnal enuresis of young male children may be caused by reflex irritation from several organs. I am positively of the opinion that circumcision will completely relieve whenever the prepuce is irritated or irritating, and never otherwise. Only last week I was consulted with reference to a boy six years old, who had been circumcised four years ago, and had regularly wetted his bed every night since. But here the mere inspection of the penis indicated the fact that there had been extra-preputial irritation.

Dr. Brown-Séquard recently made to Dr. F. N. Otis¹ the following interesting statement:

CASE VI. While in London during the past year a gentleman was brought to me who presented all the rational signs of advanced cerebral *ramollissement*. I had looked upon the case as quite a hopeless one, until noticing that the patient frequently applied his hand in an absent sort of way to his genital apparatus. Permission being accorded, examination of the parts revealed an aggravated inflammatory phimosis, complicated with acute balanitis. On making this discovery, I expressed my belief of the possibility that the *apparent ramollissement* might be due to reflex irritation. Complete ablation of the prepuce, with treatment of the balanitis was advised, and practised; and in six weeks thereafter he presented himself at my office, well in every respect.

Dr. Otis' paper presents in the most lucid and forcible manner the results of reflex irritation throughout the genito-urinary tract, induced by contraction of the urethra at or near the urinary meatus, both congenital and acquired. Though the cases reported do not fall within the scope of this article, still they go far to confirm the belief which I desire to insist

1 Ohio Med. and Surg. Jour.. Vol. II., I., p. 16.

upon in connection with the subject—a belief which he expresses as follows: the full significance of this locality as a source of reflex irritation, has not yet been appreciated. A curious illustration of this irritability, was displayed in his 12th case, where constant rhythmical contraction of the cremaster muscles had induced a spasmodic action of the testes, which were carried up and down alternately in the scrotum, with a see-saw motion. Relief was had by division of strictures.

Vulpian¹ is of the opinion that there is no such thing as reflex functional paralysis, and his views are apparently shared by Dr. Jacobi, of New York, who believes that the doctrine of reflex paralysis will be greatly reduced in influence, when a more careful study is given to the cases whose phenomena it is supposed to explain. Thus nervous symptoms, consecutive to lesions of the genitals, are more often referred to contiguous transmission of a morbid process along the nerves upward to the spinal medulla, than, as formerly, to reflex paralysis—the diagnosis of ascending neuritis and myelitis being substituted for the former. In a recent paper on Masturbation and Hysteria in Young Children,² he remarks that, in spite of the vigorous and sagacious efforts of such observers as Drs. L. A. Sayre and F. N. Otis, he hesitates to fully accept their views as to the frequency of neuralgic, spastic and paralytic symptoms depending upon phimosis.

These opinions of an observer as judicious and as careful as Dr. Jacobi, are entitled to their full weight. But in the criticism of a selected case which he cites, his objections are chiefly of a negative character—the argument being, that in order to connect a disease with an efficient cause, it is necessary to show conclusively that all other usual causes were not in operation. This is a sound argument in logic, but one which is manifestly weakened in force when we consider another phase of this question, viz., whether when by the removal of a possibly efficient cause an effect ceases, a fair presumption can be raised that some other cause may have operated to produce that effect.

1 *Lecons sur l'Appareil Vaso-Moteur. Lecon 17. Paris, 1875.*

2 *Am. Jour. of Obstet. and Dis. of Women and Child. Feb., and June, 1876.*

The criticism is of a case reported by Dr. J. H. Hunt,¹ entitled: Partial paralysis from reflex action caused by adherent prepuce.

CASE VII. The patient, a boy 6 years of age, had a peculiar staggering walk, in which he seemed unable to properly control the lower extremities, and was therefore subject to frequent falls. He was nervous, and exhibited a twitching of the muscles of the face and extremities. His penis was found erected. He started and screamed in his sleep. In an attempt to protrude the tongue, it rolled about the mouth. Articulation and intellect were below the average; in the neighborhood the boy was considered idiotic.

Now Dr. Jacobi objects that the condition of the heart and spine is not stated, nor are any details given as to the previous existence or non-existence of masturbation, or acute articular rheumatism,—facts which should certainly be narrated in giving a history of a case of protracted chorea minor. But for all this, circumcision was followed by rapid improvement.

Dr. Sayre, to whom reference is made above, reported several such cases to the American Medical Association in 1870, and has since contributed largely to the literature of this subject. An illustrative example is given in his recently published lectures on Orthopedic Surgery, which is worthy of note:

CASE VIII. A delicate boy, 5 years old, unable to stand or walk without assistance, had his knees flexed at an angle of forty-five degrees, and Dr. Sayre was summoned to perform subcutaneous myotomy. Convinced that the deformity was of paralytic rather than spastic origin, the surgeon was proceeding to apply the continuous galvanic current over the upper portion of the thighs, when the nurse warned him not to touch the the boy's "pee-pee," as it was "very sore." The latter was in a state of extreme erection; glans small, pointed and tightly imprisoned; meatus, puffy and reddened; orgasm and slight convulsion invariably followed contact. Circumcision, with removal of dense sebaceous ring, gave complete relief.

Another such instance has recently been recorded by Dr. E. P. Hurd, of Boston,¹ in such fullness that it cannot be here reproduced in detail:

CASE IX. The lad was 7 years old; and the symptoms those of *Ataxie locomotrice*, incoordination of muscular motion, staggering, headlong

1. N. Y. Med. Record, Oct. 16, 1875.

1. Bost. Med. and Surg. Journal, Jan. 18, 1877, p. 68.

pitching, inability to carry food to the mouth, pupils dilated, double outward and upward squint (paresis of third pair of nerves, Jaccoud) and intellectual hebetude. After one severe epileptiform convulsion, a medical man who saw the case in consultation, was inclined to the diagnosis of scrofulous cerebellar disease. The little patient continued to fail rapidly, when an accidental glance revealed an elongated strangulating prepuce, and minute urinary punctum. An operation was followed by complete relief, the only relic of the disturbance, being an occasional stiffness and awkwardness of the gait in running.

I shall not dwell upon the fact that the local irritation resulting from preputial stenosis, is often the first link of the chain which results in confirmed habits of masturbation, because there are few professional men who will not assent to the assertion. I am strongly of the opinion that many young men who are carrying about with them an intolerable wound of the moral consciousness, are more sinned against, than sinning. Sinned against, I repeat, merely because it is the duty of every parent to insure his male child a fair entry into the lists of the struggle where the fittest survive, by providing him, as far as possible, with a healthful body. Neglect or evasion of that duty is surely a sin. It is probably true that numbers of boys are taught pernicious practices in schools, but a very large proportion of such cases result from manipulation of the genitals, the incitement to which lies in an irritable prepuce and undue sensitiveness of the mucous membrane. Dr. Jacobi¹ has done excellent service in calling attention to the extremely early age at which masturbation can be practised. In one of his cases, the orgasmic excitement seems to have been produced between the ninth and thirteenth month. Physical examination of these little patients, generally reveals red, cedematous, exquisitely tender glans and prepuce, friction upon which by the clothing, when riding in the street cars or upon a rocking-horse, when climbing, when the thighs are approximated or crossed in the sitting posture, (especially upon the floor), or when efforts are made to extricate the male organ from the thick "first pair" of trousers, suffices for the effect.

In adult males the hyperæsthesia of the membrane may

1. Op. cit.

engender a species of pseudo-impotency. I have observed two cases in which this condition was so marked that intromission in coitus was at once succeeded by ejaculation; and marital unhappiness resulted. Doubtless others have been consulted for similar trouble. I have no question that the advisability of circumcision for such patients should be carefully considered, especially when there is præputial retention of semen, such as Erichsen¹ reports that he has known.

True excessive nocturnal spermatorrhœa, as distinguished from undue prostatic secretion under various excitants, is often occasioned by præputial stenosis. The distinction between the two forms is important. It was Ricord who announced that there is a disease worse than syphilis—syphilophobia. One is tempted to add that the youth who, when straining at stool, finds a little glairy prostatic fluid at the meatus, and is thereafter for years confident that he is wasting away with spermatorrhœa, is more to be pitied than the syphilophobist. Subjoined is a single case of my own observation, which illustrates the truth of the statement made above:

CASE X. A gentleman, 35 years old, living in Wisconsin, wrote to consult me regarding a nocturnal spermatorrhœa which was of such frequent occurrence that he was gradually wasting away under its influence. Sexual desire had been wanting for several years—the discharges occurred often six and eight times in the week, without dream or erection. In answer to the full and careful inquiries of my letter, he responded that retraction was impossible, and had always been so. On the strength of my written opinion that an operation might afford him relief, he visited Chicago in June, 1873, and submitted himself to an examination. I removed a rigidly contracted prepuce whose minute orifice was surrounded by tissue of almost cartilaginous hardness, and in three months thereafter, as he remained free from his trouble, he contracted a matrimonial engagement, which (he has since reported by letter) has proved to be the happiest step of his life.

The connection between preputial deformity and intestinal disorder has been noted, so far as I am aware, by but three authors,² and that in brief terms. Perhaps, for this reason, a reference to two cases of personal observation, where such

1. Science and Art of Surgery, Phila., 1869, p. 1140.

2. Van Buren and Erichson. Op. cit. Henry, Am. Jour. of Syph. and Derm., 1870, p. 123.

connection seemed evident, may prove of interest. If a child has "ballooning" of the prepuce during micturition, he usually assists the expulsion of urine by straining, and prolapse of the rectum is liable to ensue.

CASE XI. A 3-year-old child had frequent prolapse of the rectum at stool—the bowel descending two inches at times—the discharges being frequently bloody, always painful and accompanied by a fit of crying and straining, from which he recovered in a faint and exhausted condition. Occasionally, instead of voiding feces which were merely stained with blood, he had evacuations which the mother described as consisting of "almost pure blood." The gait was unsteady, the child frequently falling when walking upon a level plane. Prepuce, redundant and slightly puffy—"ballooning" during micturition with expulsive muscular effort. The child frequently cried out that a pin was pricking him, pointing at the same time to the genitals; and on such occasions when his clothing was examined, no cause for complaint could be found. While practicing circumcision the preputial fold of mucous membrane was found reddened and almost double the normal thickness. After the operation the child had rectal prolapse and a bloody discharge once only—two days after the operation. He is now in perfect health.

CASE XII. A lad employed by the American District Telegraph Company, aged 8 years, was brought to me by his father in consequence of "lumps in the groin." He was a fine, healthy, rosy-cheeked boy, with an innocent and honest expression of countenance. He was found to be affected with double inguinal hernia, easily reducible. On close questioning I discovered no cause for the rupture, excepting that he had for some time been straining excessively at stool—the inguinal swelling having gradually more and more attracted his attention. While manipulating the hernial tumors in the process of their reduction, I observed that as soon as the scrotum or inguinal regions were touched, the penis at once became rigidly erect, and this the instant the touch was repeated. This phenomenon was also observed by Mr. Smith, the instrument maker, who, at my request, took his measurement with a view to applying a double truss. I questioned the lad carefully with reference to his habits, and he affirmed with candor that he had never improperly handled the parts, since all the boys employed by the Company had been warned against the consequences of such a practice. I then, with considerable difficulty, succeeded in retracting a tight prepuce and in extricating from beneath it a dense ring of crust-like sebum, the patient stating that the foreskin had never before been drawn back, and that he had not known such a removal was possible. His father was instructed with regard to the proper cleansing of his boy's penis, and has since reported the radical cure of the hernia, as well as relief from straining at stool, and from the almost constant priapism.

Reliquet¹ furthermore describes a general hysteriform condition associated with preputial irritation, and Van Buren and Keyes cite a case in which all the symptoms of cystitis were induced by a tight prepuce with a small orifice enclosing a sensitive glans. Ablation of the foreskin relieved the patient, who, six years afterward, had no recurrence of his disorder. Coulson² gives the similar history of a boy seven years old. Other cases where symptoms of stone in the bladder were relieved by preputial excision, are on record.

The contraindications for circumcision may be briefly stated as those which would, when judiciously considered, forbid surgical interference, in any case.

The apparatus and procedures devised for the operation, have indeed been numerous. Beginning with the Jewish shield or lyre, and the primitive wooden disk of the Arab, the long list includes the devices of Guérin, Cusco and Panas; Blandin's bistoury, with retractable sheath; Nélaton's³ triblade forceps; Cruise's⁴ double blade dilator; Ricord's guarded needle; and Henry's lead lined director, in which the point of a bistoury is buried, after transfixion from without inward.⁵ Henry has also constructed a pair of strong, curved, self-closing clamp forceps, for embracing the prepuce. W. R. Gillette, of New York, has succeeded in relieving the stenosis by the introduction of sponge tents. My friend, Dr. R. W. Taylor, also of New York, has an improved pair of scissors for use in the relief of phimosis, produced by chancroidal ulcers.⁶ The blades are strong, three inches in length, the lower flattened transversely, at right angles with, and one-tenth of an inch larger than the upper one, rounded smoothly at the end, and resembling an elevator for necrosed bone. Its obvious

1 *Traite des opérations des Voies Urinaires*, Paris, 1869.

2 *Diseases of the bladder*. London, 1857.

3 *Gaz. des Hôpit.*, 31, 1868.

4 *Dublin Quarterly*, 48, p. 483.

5 *Am. Jour. of Syph. and Derm.* 1870, p. 124.

6 *On some practical points in the Treatment of the Phimosis, produced by Chancroidal Ulcers*. N. Y., 1872.

use requires no comment. The procedures of Vidal, Dolbeau, Tripiet and Cullerier, are described in most of the text books.

The simple but inelegant dorsal incision has the disadvantage of leaving on either side of the glans, two projecting wings or ears, which may become filled with plastic exudation, and seriously interfere with the usefulness of the organ. In one instance I have seen a nodulated mass as large as a hen's egg, depending beneath the frenum, after an incision made in the tissues when in a highly inflammatory condition. Combined with the circular operation, the dorsal incision meets almost all indications.

Pooley makes the useful suggestion to employ multiple sutures, after excision, with fine black silk—the color enabling the operator to remove them afterward with greater readiness. Henry used the continued suture and failed; but it is yet true that multiplicity of sutures, sufficient to give perfect coaptation, is required to secure the best results.

The so-called "backward slip" of the mucous membrane, by which after ablation of the fore-skin proper, a second phimosis is discovered of the membrane embracing the glans, has led to the general method of operating in two steps, successively dividing first the cutaneous, and later the mucous envelope. This should always be resorted to in the case of children.

In adults, the two layers may be simultaneously divided, when they are not agglutinated, by the method of Benjamin Anger, of the Bicêtre Hospital of Paris—his procedure having been recently made public in the French journals. The intended line of section is first traced in ink, when an assistant seizes the prepuce with two pairs of ordinary forceps, one above and one below the glans, being careful to make no traction with them, beyond what is necessary to advance the line beyond the glans. A double whip-cord ligature is then forcibly tightened about the projecting part in advance of the line in ink, and excision practised. There is no hemorrhage, no sutures are required, and no anaesthesia is produced. The pain is sharp and short. Anger claims that in two days his patients are dismissed.

I have operated by slightly modifying Anger's procedure as follows: A Wheeler & Wilson's sewing machine needle held in a pair of needle forceps, or a perineum needle, such as the gynecologists use, with an eye at the point, is threaded with silk, armed with a bit of wax, smeared with vaseline, and carried through the preputial meatus. The foreskin is pierced from within outwards on each side of the glans, at a point midway between the centre of the dorsum and the frenum. The thread is withdrawn from the eye of the needle, the needle brought out as it entered, and after this operation is completed on both sides, traction is made upon the loops of silk until the line in ink is advanced beyond the glans. Then the whip cord ligature is applied as by Anger, and ablation practiced. This method also is, of course, inapplicable, where adhesions have occurred, since the latter preclude the possibility of drawing forward the prepuce.

The treatment of paraphimosis, which is merely an accidental complication of preputial stenosis, requires the greatest consideration in the adult where there are coexistent chancreous or balanitic lesions. I desire merely, in concluding this sketch, to call attention to the fact that when this accident occurs in children, the operation for the so-called relief of stricture, is quite valueless. For actually, even if the nicking of the tissues behind the corona is done, the paraphimosis is not reduced. The reason is that so much of the preputial tissue is distended by the infiltrated swelling, it becomes impossible to draw this swollen tissue over the glans. Of course, when practicable, compression of the glans should be practiced in order to execute the little manoeuvre represented by plates in most of the text-books. When this is ineffectual, the parts are best left covered with a cold water dressing merely, and the paraphimosis allowed to take care of itself. I think the annals of the surgery of childhood will be sought in vain, to discover a single case where strangulation and gangrene of the glans followed. That which actually occurs is relief of the preputial stenosis and the paraphimosis at one and the same time. A transverse ulcer soon forms, to liberate the soft tissues of the encircling ring. The infiltrated foreskin

thereafter refuses to come forward till resorption has occurred. This is not speedily accomplished, and the consequence is that in the end—and I speak after observation of many cases—the formerly tender and irritable glans becomes indurated so as to endure the friction of the clothing, the prepuce can be worn back of the corona, and nature accomplishes finally what the surgeon aimed to effect by his more brutal bistoury.

NOTE.—Since writing the preceding lines I have received an interesting monograph by Charles Mauriac, of the Hôpital du Midi, Paris, entitled "Mémoire sur le Paraphimosis," in which this subject is exhaustively treated. It was interesting to me to discover on the sixteenth page of this brochure the following remark, which confirms the statement made above—a statement at variance with the dictum of most authors in surgery—respecting the rarity of strangulation and gangrene following paraphimosis. I translate literally:

"I have read in several works that the constriction exercised by the præputial ring upon the subjacent tissues, may be so severe as to compromise the vitality of the glans and of the anterior portion of the corpora cavernosa. They speak of gangrene of the glans resulting from paraphimosis, as quite a common accident. Well, without denying this possibility, I declare that it must be very rare, and for myself I have never seen an example of it, where there were no chancrous complications. Without doubt, interference with the circulation in the glans may be carried to an excessive degree—the latter becoming turgid, violet colored, and in volume twice or three times larger than before. But by its vascular anastomoses with the corpora cavernosa and the spongy portion of the canal, the dangers resulting to it from compression of the dorsal arteries and veins of the penis, are obviated. I repeat, in uncomplicated paraphimosis, the *prepuce alone mortifies*, the glans, though placed in other conditions than those of its normal nutrition, *does not mortify*." [The italics are mine.]

Elsewhere this same author describes the contrast between strangulation in hernia, where the ring never ulcerates while the constricted gut mortifies, and in paraphimosis where the constricting ring generally ulcerates and the strangulated organ almost never. On the twenty-eighth page of his monograph he adds: "Strangulation of, the prepuce behind the corona glandis results, so to speak, in the operation for circumcision, half finished." Mauriac supplements this natural operation by surgical interference in the removal of the plastic tissue remaining in the lower limb of the prepuce. But it is to be remembered that he is writing of paraphimosis in adults, and does not especially consider the accident as occurring in male children.

THE NITRATE OF POTASSIUM IN THE TREATMENT OF SCARLATINA.

By F. B. EISEN BOCKIUS, M. D., LL. B.,
(Consulting Physician to North Star Dispensary.)

At the present time, when the concentrated gaze, not only of the profession, but of the whole public, is turned to the prevailing epidemic of scarlet fever, it seems to me both wise and fitting that medical practitioners should exchange, in some tangible form, the record of results of different modes of treatment in this disease; and in pursuance of this belief I propose to submit my own experience in the use of the nitrate of potash, and the logical basis for such use, together with those points of collateral treatment which stand prominently associated with the success of that experience.

As a preposition to my essay, I will be pardoned for saying that, in my opinion, much valuable time and effort have been expended in ascertaining the province of new remedies, that would better have been rewarded in extending and developing the well known qualities of an old one.

I shall assume as tenable:

1. That the simplest and mildest of medicinal agents (in necessary properties equal), is most preferable.

2. That scarlatina is a zymotic disease,

(a). Characterized by a hyperplastic condition of the circulating fluids;

(b). That the primary danger arises from the direct influence of the septic poison on the blood, lymph and chyle; and may be measured by the harshness of the febrile symptom;

(c). That the secondary danger is due to inflammations of the serous and mucous membranes, and adenitis (sequelæ); which have their origin in the primary corruption of the nutritive fluids.

And in favor of the use of the potash salt, I shall urge *a priori*:

1. That of all the quasi-specific agents recommended in the zymotic fevers none possesses the accidents of popular employment, harmlessness and mildness of administration, in as great a degree as the nitrate of potash; while some, notably carbolic acid and the sulpho-carbolates, are violent local and cerebro-spinal irritants.

2. Whatever may be the theory of scientific men, based on the disagreeable odor of the remedies, experience in the arts firmly inculcates that no antiseptic has more honest claims for efficiency in destroying the germ of putrefaction and arresting fermentation, without impairing the nutrient properties of the material acted upon, than the subject of this article; experiments conducted in the field of the microscope demonstrate the rapid cessation of life in rudimentary animal and vegetable structures, when subjected to the influence of this drug. What then was my surprise to find that not one of our standard works on materia medica, or therapeutics devotes even a single word to this quality of the nitrate which has rendered it invaluable for the preservation of meats in the commercial world.

(a). All works on therapeutics agree in ascribing to this salt, in an eminent degree, the property of rendering the blood aplastic in the living, and maintaining its fluidity in the dead subject; while through the partial decomposition of the drug, in the circulation, and the consequent liberation of a portion of its abundant oxygen, the whole mass is rendered arterial, retaining its hue even after death. As plasticity of the blood seems an essential of rheumatism, which is a common sequela of scarlatina, the indication for the employment of the nitrate is plain.

(b). Practical therapeutists also agree in conceding to this salt the power of reducing the force and frequency of the pulse, and lowering the temperature of the body; requirements which are essential in this disease, and which are possessed by no other antiseptic.

(c). If the nitrate of potash is an antiseptic then, in so far as the specific poison, by contaminating the blood and lymph, is instrumental in developing serous, mucous, renal and

lymphatic inflammations, the effectual eradication of the germ and its arrested reproduction by means of this remedy, would measurably ameliorate these local symptoms; while if employed before their development it should prevent their occurrence. In the case of the principal gland liable to disease—the kidney—it should afford almost total immunity, both through its sedative action on the circulation, reducing renal congestion, and by its peculiar diuretic influence, being that of a stimulant to the functional activity of the secreting cell, instead of causing turgescence of the afferent vessels, as do the irritants; indeed, I know of no single remedy so certain of affording relief in renal suppression, from whatever cause, as the nitrate of potash.

With this theoretical showing in favor of my subject, I shall briefly consider its utility as an antiseptic in zymotic diseases in the light of experience. When I commenced the use of this drug, in the treatment of scarlet fever, I was not aware that it had ever been employed, or even recommended in the septic diseases; a hasty search through such works as were readily accessible, revealed but one such instance, being that found in Kost's *Mat. Med. and Therapeu.*, p. 242, where mention is made of the great success of Dr. Stottsberry in the treatment of yellow fever by this medicine; and that of Dr. Stevens, who used it very extensively and with pre-eminent success in combatting the putrescent (zymotic?) fevers of British India; both experiments of quite recent date. To these facts I must be permitted to add my own observation during the present epidemic, in the early part of which I resorted to the ammon. carb. and belladonna treatment, with indifferent success, the disease not being dangerous, but the sequelae troublesome. Since employing the nitrate in scarlet fever, I have kept record of a large proportion of cases for the purpose of determining whether the effect of the medicine was merely to delay the development of such sequelae as renal and lymphatic adenitis, or to completely obviate them with an opinion in favor of the latter; this record comprises one hundred and twenty-three cases, in which there were three deaths, all of the malignant type, two of which had been med-

icated injudiciously by a notorious quack, which had, however, but little influence on the result; cases so singularly free from disagreeable complications that I am compelled to believe that the harmlessness of the disease is due to the peculiarity of the treatment. The dose in which I have administered the remedy to children under 8 years of age, has varied from one to five grains, repeated every second or third hour during the first day and night, and every third or fourth hour (depending on the force of the circulation) afterward, until the normal action of the heart announces the cessation of septic irritation; the combinations in which I have used it, have been ipecac, opium and spt. nitre. Where decided evidences of weakness occur, I have prescribed quinia and iron; or better, if there be much emaciation, calcei phosph., pepsina and ol. morrhue in emulsion.

In those instances where the anginose symptom is pronounced, it is my practice to direct fat salt pork, sliced thin, stitched to a flannel, and sprinkled with powdered gum camphor, to be applied sedulously to the throat, until the impetiginous eruption, it is sure to produce, becomes unbearable; I do not favor the internal applications so frequently and harmfully made, where a frail, nervous child, suffering intensely from faucial inflammation, is harshly seized, its jaws pried open with a spoon, and while the little one struggles with its remaining strength for the necessary breath, the humane (?) physician shuts his eyes as if in sympathy, and thrusts a barbarous sponge probang, again and again, against the fragile membrane, tearing the immature cicatrices asunder, and leaving the whole faucial surface one bleeding sore; and then the intelligent (?) practitioner pathetically asks why his patients die, as if to live under such treatment were a pleasure. Whatever applications are to be made to the throat internally, should be conveyed by a camel's hair pencil; the combination I have found most useful, in the few cases I have had occasion to employ it, consists of

Acidi carbolici.....	grs. x—xx
Liq. ferri subsulph.	Min. x—xx
Potass. chloratis.....	3ss
Aq. destil.....	f3i

to be applied only by the physician himself.

Even where the throat symptoms are but slight, the officinal linimentum camphoræ should be embrocated, and the throat protected by a flannel; demulcent drinks to be freely allowed; temperature of the apartment to be kept at 70°, and the air moist; no baths are to be given at a lower temperature than that of the surface, until the eruption has faded. Under this treatment, faithfully executed, the period of the eruption is shortened at least one day, and the sequelæ, which commonly follow in its track, are almost unknown; in my experience 89 per cent., of those who had no complication when I first saw them, escape all complications. In closing, I wish to say that, however severe may be the local disturbance at the commencement of the disease, and whether peritonitic, urinary or gastro-intestinal, it will more surely and certainly disappear beneath the full, free and fearless administration of this salt, than under the usual treatment for idiopathic affections.

THE ENBALLOMETER.

By E. FLETCHER INGALS, M. D.

[Lecturer on Diseases of the Chest and Physical Diagnosis, in the Spring Faculty of Rush Medical College, Chicago.]

Auscultatory percussion was first brought to the notice of the profession by Drs. Camman and Clark, nearly forty years ago.

Their method of performing it was to press the objective end of a solid stethoscope* evenly on the surface directly over the most superficial portion of the organ or tumor to be examined, while the ear was applied to the opposite extremity of the instrument. At the same time an assistant performed percussion in the usual way, one or two inches from the point at which the stethoscope was applied.

* This instrument consists of a cylindrical piece of wood, about six inches long, and nearly an inch in diameter. The objective end is a truncated wedge, which allows of its easy application between the ribs. The other extremity is furnished with an ear-piece, which excludes external sounds

By this method, the examiner could map out the size of the liver, spleen, kidneys, heart or intra-thoracic tumors with great celerity, and almost as much precision as though the organs were exposed to view.

Notwithstanding the advantages offered by this method, it has never come into general use, probably on account of the inconvenience of obtaining assistants who would perform percussion satisfactorily. The Enballometer removes this difficulty by enabling the examiner to perform percussion for himself.

The instrument, as shown in the cut, consists of a hollow cylinder, three inches in length, with a diameter of seven-sixteenths of an inch. A chest piece is screwed upon the pectoral end of this cylinder, and by the other extremity it is connected, by means of a small rubber tube, eighteen inches in length, with a rubber bulb. Within the cylinder, fitting it loosely, plays a small, metallic plunger, or hammer. This hammer, shown separately in the cut, is turned from a rod of brass, is about one inch in length, and weighs half an ounce. Soft rubber cushions are placed within the cylinder at each end, to prevent the clacking sound which would otherwise be produced by the stroke of the hammer.

Immediately above the chest-piece, the cylinder is perforated, to allow free ingress and egress of air.

When the bulb is compressed, the hammer strikes upon the pectoral end of the instrument, and when it is allowed to expand, the hammer is thrown back by atmospheric pressure.

In using this instrument, the examiner applies the stethoscope with one hand over the most prominent part of the organ to be examined, while, with the other hand, he holds the enballometer, grasping the cylinder with the thumb and fore finger, and holding the rubber bulb in the palm of the hand by the remaining fingers.

If preferable, the examiner may hold the bulb with the disengaged fingers of the hand which holds the stethoscope.



The instrument should be held perpendicularly to the surface, and percussion made by sudden contraction and relaxation of the fingers holding the bulb. The relaxation should follow the contraction instantaneously, so that the hammer may at once recoil.

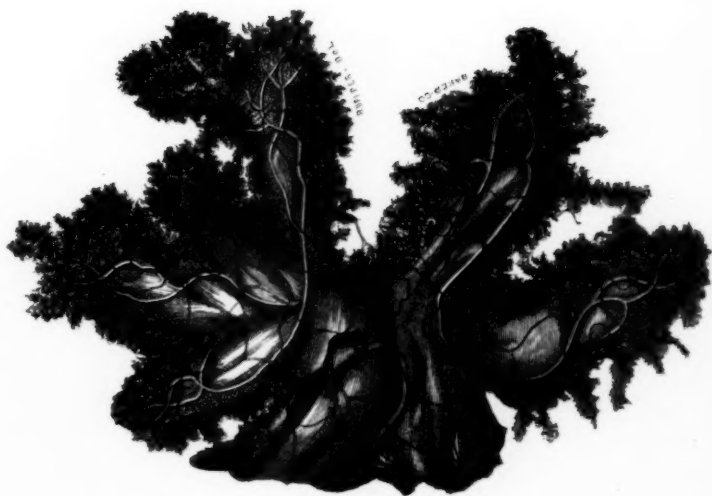
The results of the auscultatory percussion, aided by this instrument, are very satisfactory. The ordinary binaural stethoscope, with a small chest-piece, may be employed in place of the solid instrument recommended by Doctors Camman and Clark.

THE ANATOMY OF VILLOUS CANCER.

(WITH PLATE)

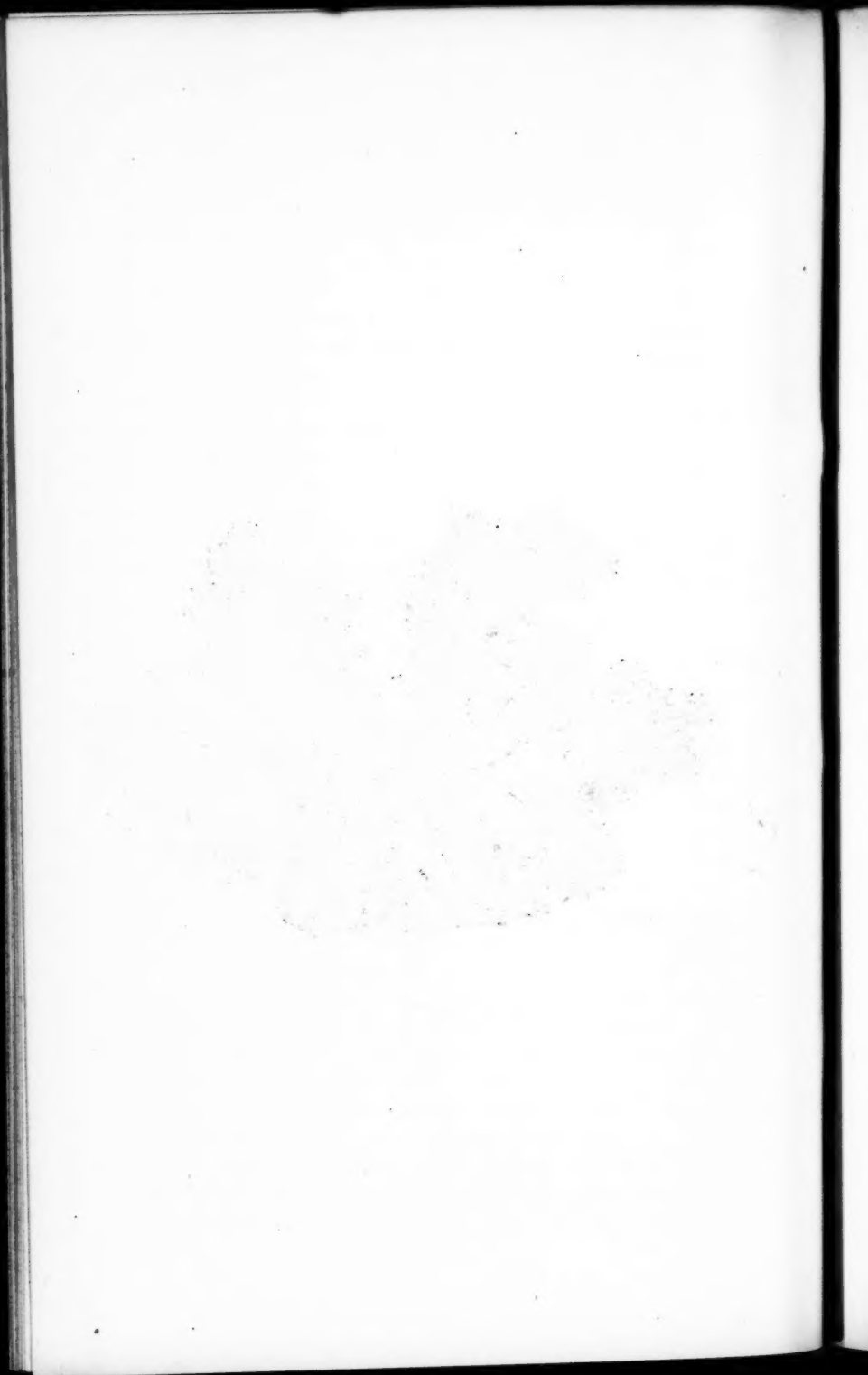
BY THE EDITOR OF THE PATHOLOGICAL TRANSACTIONS OF THE
CHICAGO MEDICAL SOCIETY.

In the *Chicago Medical Journal* for September, 1872, may be found an article by Dr. John E. Owens, concerning a case of cystic disease of the ovary under his care in St. Luke's Hospital. Ulcerative perforation of the intestine took place, which was promptly followed by general peritonitis and death. In pursuance of my duties as pathologist to the hospital, I made a *post-mortem* examination of the body, and my detailed report to Dr. Owens is incorporated in his article. The case proved to be one of those unfortunate ones which are necessarily fatal, and are therefore beyond hope of cure by any combination of surgical skill or experience; but it was a very fruitful and instructive one from the standpoint of pathology. Among other pathological products, I found one which I described as follows—quoting from the report aforesaid: "The uterus was slightly enlarged, the cervix filled with tough reddish mucus. From its posterior superior aspect, a little to the right of the median line, a cauliflower growth was found as large as a hen's egg; this proved to be a beautiful specimen of villous cancer." At that time I prepared and mounted some thin sections of this specimen, and they are yet in a good



Drawn in Color under the Microscope from Dr. Danforth's preparation,
by R. U. Piper, M. D.

Engraved by Baker & Co.



state of preservation, so that a very good idea of the peculiar architecture of villous cancer may be obtained by studying them. Believing that a brief description of the anatomy of this singular as well as rare form of carcinoma may be of interest to the members of the Society, and to the readers of its *Transactions*, I offer the following observations, and submit the accompanying colored plate. I ought, in the first place, however, to say a few words respecting the plate. It represents with great exactness the appearances of the specimen from which it was drawn. The section was stained with Beale's carmine, and mounted in Price's glycerine in a glass cell. Contrary to my usual experience with glycerine preparations, it has kept remarkably well, and may yet be studied with considerable satisfaction. The camera drawing was made in colors by Dr. R. U. Piper, and I have again to acknowledge my great indebtedness to his skill and kindness. The engraving was executed under Dr. Piper's personal supervision by Messrs. Baker & Co., of this city. It is a most successful reproduction of the appearances presented by the stained specimen from which the drawing was made. It represents the structure as seen under a magnifying power of 45 diameters. Of course it will be understood that it represents a carmine imbibition, and not the natural color of the tumor. The so-called villous cancer of most writers upon pathology, is identical with the cylindrical epithelial cancer of Rindfleisch. It is very rarely seen except upon the surface of mucous membranes, and is then usually the product of long-continued irritative hyperplasia, most generally coupled with a constitutional tendency towards cancer—or a cancerous "diathesis." Its favorite locations are the mucous surfaces of the stomach and bladder—and of these, the bladder is most frequently invaded. "It occurs in its pure form," says Wagner; (*General Pathology*, page 492), "only on mucous membranes, (urinary bladder; uterus and vagina; so-called cauliflower growth of the vaginal portion of the uterus; stomach, etc.,) rarely in parenchymata." It is, in general, a modified form of papilloma, since it is developed from the same histological basis, namely, the epithelia of the papillar or glandular involutions of the mucous mem-

branes or integuments. But, pathologically it differs radically from the simple papilloma, in that it results in the production of an atypical cell growth; hence it is truly a malignant growth.

But although villous cancer is pre-eminently a disease associated with the mucous membranes, it is well known that it *may* occur upon the integument and upon serous membranes. Upon this point Rokitansky says, (Path. Anat. Vol. 1, page 216): "So far as we know, it occurs solely upon membranes, for the most part, the pituitous, and most particularly upon that of the urinary bladder, as so-called villous muco-membranous tumor. It also, although far less frequently, affects the common integuments and serous membranes." In the case under consideration, it was produced upon the free surface of a serous membrane; that is the reflection of the peritoneum covering the posterior aspect of the fundus uteri. As the peritoneal membrane is destitute of both glandular involutions and villi, it follows that these structures are not necessary for the production of papillary tumors, whether malignant or benignant. Enquiry into the history of the patient failed to develop any constitutional tendency to cancer, or any local irritation or injury sufficient to account for the growth. Moreover, upon inspecting the body, I found no other cancerous deposits in any part or organ. The villous tumor connected with the uterus, then, was, so far as could be determined, a purely local manifestation, due to some entirely unknown cause. In the light of recent investigations in the domain of pathological cytology, we are warranted in presuming that the growth had its inception in some irritative disturbance of the nutrition of the part—that condition of things which Arnott has called "irritative hyperplasia."

The investigations of Klein (Stricker's Histology, page 572), seem to have demonstrated clearly enough that lymphatic canals or spaces exist in the serous membranes. This discovery renders it less difficult to account for the development of a villous growth upon the surface of the peritoneum, since it is now well known that the cells of the lymphatic vessels play an important part in the formation of cancerous

structures. It seems now to be a pretty well settled doctrine of pathology, that cancerous new formations, whatever may be their variety or location, are the product of the atypical growth of epithelial cells. Of course this does not apply to the "small-celled infiltration;" but the small-celled infiltration cannot be regarded as a necessary element in cancer.

The specimen under consideration was, as I have described it, not far from the size of a hen's egg. It sprang from the posterior aspect of the fundus uteri by a large, short, stumpy pedicle; in fact, it would be just as accurate to say that it was sessile, and to regard the uterine or attached portion as the body of the tumor. The free surface presented the ordinary appearances of the more rapidly growing types of the papillomata; that is, innumerable papillæ or villi projected themselves in all directions from the body of the tumor, and reached out into the abdominal cavity. The surfaces of the mass of the tumor, and of the villous processes, were smooth and shining, and its color was identical with that of the neighboring peritoneum. The peritoneum, as far as the naked eye appearances indicated anything, seemed to be pushed forward, in advance of the sprouting mass, and therefore to cover each individual process which entered into the structure of the tumor. The growing villi underwent a process of subdivision, without any attempt at regularity or symmetry, until at length the ultimate villi were reached, and these were invariably clad with a luxuriant growth of cells, mostly club-shaped, or irregularly columnar; but these cells presented an endless variety, as regards form and size. That is, they were atypical epithelial cells; therefore they were typical cancer cells.

The plate represents a group of the larger villi, together with the pedicle by which they were attached to the body of the tumor. Their irregular or asymmetrical manner of subdivision is well shown. As the magnifying power was but 45 diameters, of course the minute structure of the ultimate villi is not shown—the design being rather to present a general idea of the architecture of the villous morbid growth. The vascular network was exceedingly rich. Only the larger

vessels are shown in the figure; the darker network representing the subdividing arterial twigs, the light blue lines showing the returning venous trunks. When the margin of one of the outgrowths shown in the plate is examined with a half-inch objective, the rough, nibbled appearance seen in the figure is resolved into a luxuriant growth of primary villi. These minute offshoots present a very great variety, as regards form, size, and type. Some are long and slender, closely resembling the intestinal villi; some are shorter, and terminate abruptly in knobby extremities; some have very slender pedicles, and then suddenly bulge out into pouch-shaped extremities; some have very large pedicles, and as suddenly dwindle away to a terminal point. There are villi which have but a single terminal extremity, and those which have two or three; that is, those which divide dichotomously, or trichotomously. In short, it would seem as though every known—or, indeed, possible—variety of villus is utilized in the make-up of the villous cancers.

When a single ultimate villus is studied with a quarter-inch objective, it is seen to be clad with a dense, compact layer of irregular cells. A blood vessel enters it, forms a twisted and tortuous loop, and then emerges. The body of the villus seems to be made up of a closely woven mesh of connective tissue cells. On a future occasion, it is my purpose to present a plate, illustrating in detail, the structure of an ultimate villus.

REPORTED, March 19, 1877.

EXPERIMENTS IN COLORED SKIN GRAFTING.

By DR. J. H. WM. MEYER.

[House Physician in Cook County Hospital.]

CASE I. Name, Francis Bozee; age, 38; occupation, carpenter; born in France; diagnosis, ulcer of leg. Admitted to Cook Co. Hospital, Sept. 18th, 1876; discharged Jan. 1st, 1877. Recovered.

Last January, patient struck his left shin with the heel of

his right boot, breaking the skin. The abrasion increased in size, and finally became a large and deep ulcer.

On admission, we found a nearly circular ulcer, about three inches in diameter, situated over and to the left of the tibia, about the middle of the leg. The edges are ragged and everted; the vicinity of the ulcer much inflamed, and the surface composed of a large slough. Gives a history which indicates a syphilitic origin.

Removed the slough and ordered poultice.

Sept. 29th. The slough having separated, the dressing was changed to ceratum resinae, and a bandage applied. The ulcer is now four by three inches.

Oct. 10th. The ulcer has undergone no change.

Patient is ordered to keep his bed, the leg is slightly elevated, and three small grafts are placed within half an inch of the outer edge of ulcer.

Oct. 10th, P. M. The surface is suppurating very freely; two of the grafts were washed off with the pus. They were replaced, and the surface left exposed to the air.

11th. Suppuration not so profuse. Grafts keep their places.

12th. The external cuticle of the grafts wrinkled. Cover the ulcer with oiled silk, and wash it twice daily.

13th. External cuticle washes off with the pus.

14th. Grafts are firmly adherent; a tooth-like projection is extending from the outer border of the ulcer toward the central graft.

16th. Projection referred to, has reached and become continuous with the graft. A second projection went through the same process.

23d. Suppuration has much diminished; the grafts and the skin from its edges are covering the ulcer rapidly.

26th. Transplanted a graft from a negro's skin upon the middle of the ulcer.

28th. The black, horny layer looks wrinkled, and is loosening.

29th. This morning it washes off with the pus, leaving the graft looking pink, but not as clear as white skin.

30th. Edges are closing in; grafts are enlarging.

Nov. 3d. Negro's cuticle is growing nicely, but presents, as yet, only a red color.

5th. Fungous granulations around the grafts are lightly brushed with argenti nitratis grs. v. ad aqua 3i.

13th. Piece of negro's cuticle looks quite black.

31st. Ulcer has all healed over; the black graft remains black.

CASE II. H. Bell, aged 52; occupation, mason; native of Ireland; diagnosis, varicose ulcers of leg. Admitted to Cook County Hospital October 12, 1876; discharged Jan. 2, 1877. Recovered.

Patient has had varicose veins as long as he can recollect. Sixteen years ago a slight abrasion on his left shin was followed by an ulcer of two month's duration. Three years ago he had another at the same spot, which was soon healed. Last fall a third ulcer appeared on the outer aspect of the left ankle, and another on the inner side.

On admission, we find large, ill-conditioned ulcers around the left ankle. Applied ceratum resinæ on all but the largest, upon which two grafts from a negro's skin were placed, and covered with oiled silk.

Oct. 14th. Both grafts washed off with the pus, but were replaced.

Oct. 15th. Grafts adherent; horny layer wrinkled.

19th. Horny layer of grafts has fallen off; true skin is adherent; looks pink.

Ulcer closing in towards the grafts; very little suppuration.

Oct. 22d. During the night one of the grafts was pulled off by the clothes; the other is firmly adherent; looks blackish.

30th. Edge of ulcer has become continuous with the graft, which has grown about three-fourths of an inch. The original graft is as black as the negro's skin from which it was taken, and fades out towards the border. About three-fourths of an inch from the centre of the graft, the skin is as white as that of the patient.

(Reported March 19, 1877.)

ENCEPHALOID CANCER OF THE LIVER IN A CHILD.

By DR. C. J. LEWIS.

John A. Aet. 13; born in Sweden; came under my care Aug. 20, 1876. In April last this boy was kicked by an older brother in the right side, just below the short ribs, causing him to remain in the house for about a month. He was visited by a physician twice for this injury, and he so far recovered as to be able to attend school for a few weeks. There was slight ecchymosis at seat of the injury, a little general fever, and some tympanitis. About two weeks after the hurt, looseness of the bowels supervened, accompanied by vomiting. In the early part of July an eruption appeared on the face and back of the hands, unaccompanied with itching. His appetite was small from an early period of his illness; but he continued thirsty. During the latter part of July, it was observed that his abdomen began to swell.

I attended this lad through measles in July and August, 1875, he making a good recovery. He had been thinly clad and improperly and scantily nourished. *No history of cancer in the family.*

On examination, I found the skin of normal temperature, dry, having on the face, arms, upper part of the chest and shoulders a fine and quite closely studded papulous eruption of a yellowish brown color, and coming in crops. The abdominal subcutaneous veins were very much enlarged. The pulse 105, small, compressible; the central portion of the tongue was coated with a brownish fur—tip and edges smooth and red; the bowels moving from eight to twelve times daily, mostly at night; urine scanty and of high color; appetite small, with some thirst. He was in bed—decubitus dorsal, with his lower extremities extended; was small in stature, having a careworn expression. His sleep was broken by his frequent stools, which at times were watery, light in color, at other times dark and grumous. There was a tumour filling the ab-

domen from the navel upward into the chest, and extending on the right side down to the pelvis. It was not tender nor adherent to the abdominal wall, but firm and immovable on under side. This was regarded as an enlarged liver. From the coppery color of the eruption, together with the scaly desquamation of the epidermis, the tumour was looked upon as having a syphilitic origin.

Aug. 22d. Has been easier since my first visit than for several weeks; vomits but little; the diarrhoea is lessened; skin moist; tongue is cleaning; pulse 85, with no perceptible change in the tumour.

Aug. 26th. Has taken no medicine for nearly two days, and for about a day and a half, the stools have been frequent, the vomiting urgent; pulse 120, very small; has had but three hours sleep in two days. I now suspect cancer of the liver.

Sept. 7th. Since the above report, he has not suffered much from pain; the stools—three to five daily—have generally been of a light brown color, although occasionally one would be like dark coffee-grounds; his sleep has been fair; pulse 84; but the tumour is evidently enlarging, and having now some liquid effusion in the abdominal cavity. Dr. J. R. Buchan saw the patient this time with me, and he also regards the disease as malignant.

Sept. 10th. The patient has taken but a few doses of medicine since the 7th inst., alleging as a reason that it "burned his stomach." Since the omission of the opium, the pain has been more or less severe all the time, with occasional spells of excruciating pain. I now ordered grain doses of powdered opium at such intervals as to allay pain.

Sept. 16th. He has been kept under the influence of opium since the 10th inst., and is so now. Whenever the effects of the opium were allowed to pass off, the pain would return, vomiting would soon ensue, with frequent stools. His pulse is 112 per minute, and a mere thread. His appetite has failed and he is rapidly sinking.

He at no time evinced much tenderness in the tumour on pressure. The emaciation was extreme. Severe or more or less constant pain was complained of, only during the last two weeks of his illness. Death relieved him on the 19th inst.

Autopsy 23 hours after death.

I was assisted in the autopsy by Drs. A. B. Strong, J. R. Buchan and F. B. Eisen Bockius. The organs in the abdominal cavity were examined and found in a normal condition, excepting the liver—which specimen is here presented. The liver was somewhat nodulated and doughy to the feel. The anterior surface presented a mass of yellowish white granular tissue, having but little of normal liver appearance, and the mass occupied nearly all of the abdominal cavity. The right lobe extended to the left of the median line, strongly pushing the pancreas against the spinal column, and terminating in a heart-shaped cyst. The left lobe extended well down into the pelvic cavity. The weight of the liver is six pounds and ten ounces, (avoird.). It was adherent to the underlying tissue by ligamentous bands along its entire dorsal side. To the naked eye, the posterior surface had no encephaloid granules, excepting the three cysts:—two under the right lobe and one under the left. These cysts were round or oblong, and about $2\frac{1}{2}$ in. in diameter, containing fluid and adherent to the liver. The gall-bladder was distended with a thick, dark fluid. The gastric, pancreatic and renal veins were greatly enlarged and full of dark blood; so also were the vessels supplying the structure of the liver. The appearance of the liver on section was similar to that presented by fresh suet. A specimen was left with Dr. Danforth for microscopic investigation.

Microscopy.—The specimen left with me presented very clearly the usual appearances of encephaloid cancer. A luxuriant cell growth, presenting an almost endless variety of cells, as regards form and dimensions—in fact, the “atypical” cells of the malignant new formations;—together with the usual number of fat globules, fatty granules and degenerating hepatic cells, which gives a very complete picture of encephaloid cancer as it commonly occurs in the liver.

Two points in the case seem to me especially worthy of attention. *First:* the fact that the liver was the only organ or part invaded by the disease. It is comparatively rare that we find encephaloid cancer confined to any one part or organ, simply on account of the facility with which it is dissemi-

nated. "In some instances, the liver is the only organ infected with cancer, or is the organ *in which the cancer originated*; but far oftener the formation of cancerous tumors in it, is consequent on cancer of some other part, especially the stomach and the breast." (Budd, "Diseases of the Liver," p. 394.) On the other hand, Rokitsky says, "Carcinoma of the liver is a disease of much greater importance, than tubercular depositions, as it occurs very frequently and is often a primary affection. (Path. Anat. II., p. 121.) This seems to imply that hepatic cancer is by no means a rare disease in Rokitsky's experience, but such is not the experience of pathologists in this country. A second point of interest is the age of the patient. I think it will be generally agreed that primary cancer of the liver—or indeed of any organ—is rarely seen in childhood.

I. N. D.

A CASE OF LEUCOCYTHÆMIA.

By DR. ALBERT E. HOADLEY.

Mrs. D. Of Irish birth; aged about 35; married.

I first saw her Dec. 17th, 1874. I was called to control nasal hemorrhage, which had been very obstinate and almost continuous for three days, and would not be controlled by ordinary means. Four physicians had been in attendance before I was called, but none of them attempted to plug the posterior nares, which treatment I resorted to and accomplished without delay or difficulty, and the bleeding stopped. From this time my patient lay in a semi-conscious condition; pulse very soft and rapid; tongue very pale, dry and clean, and the only nourishment that she could be induced to partake of was new butter-milk, which she was allowed to use in large quantities—from four to six quarts a day. At this time her death was looked for every day, and on the fourth day her condition was no more favorable than on the first day of my attendance, (the 17th); but on the 22d she was up and dressed, and by the 25th had washed nearly every washable article in the house, as

they had all been soiled with blood; and on the 1st day of January, 1875, she walked more than a mile. She looked well and said that she never felt better; her Appetite from the 25th was ravenous, and raw onions was her favorite article of food. The only medicines used were *tr. ferri mur.*, alternated with *Quiniæ Sulph.* I lost sight of her, until April 21st, 1876, when she again sent for me. I found her bleeding from the nose as before, (she said she had been getting gradually weaker for the past six weeks when the hemorrhage again commenced); but as the bleeding was slow and only of three or four hours' duration, I endeavored to control it without resorting to the nasal plug. So I employed the nasal douche, with a very strong solution of alum, and afterwards Monsels' solution of iron by injection, and at the same time giving *fl. ex. ergot* with the glycerole of gallic acid; but the bleeding would not be controlled after 24 hours diligent use of these means; so the plugs were again resorted to, which was effectual, and then followed the same train of conditions, and the same treatment first described; and May 1st, 1876, my patient was again on her feet, able to walk and work. But this was of short duration, for in a few weeks she again began to decline, and on the 9th of October she again went to bed and was very low, and for four weeks was not expected to live from one day to the next. Subsequently she recovered a little strength, her digestive power improved, and she was able to be about, though quite unable to endure any considerable exertion or excitement, but this apparent improvement was of brief duration.

She again went to bed on the 22d of Dec., 1876, and sank rapidly; on the 25th, she had a large passage of blood from the bowels—at least a quart—and on the next day a similar passage, but less in quantity. There was no positive pain, but a sense of fullness in the region of the spleen and over the stomach, with marked tenderness on pressure. She also had an uncomfortable sensation about the heart, with an anæmic murmur. From the time of the second passage of blood from the bowels, she sank rapidly, suffering greatly from dyspnoea, and died on the 29th of Dec., retaining her mind clear to the last.

The post mortem, made twenty hours after death, showed the lungs, the entire alimentary canal and the genital organs to be in healthy condition. The heart was soft and considerably dilated, with its muscular tissue thoroughly infiltrated with fat. The liver was at least one-third larger than normal, and there was also fatty degeneration well marked; the clear fat globules could readily be discerned with the naked eye.

The spleen was enlarged to three or four times its normal size, and on section presented an intensely engorged condition,—almost black in color,—and there oozed from the cut surface a dark, dirty-looking, bloody serum. The kidneys were very nearly normal in size, but on longitudinal section the cortical substance that approached in color and appearance to health was about one-eighth of an inch thick; the rest of the kidney was as yellow as fat could make it, and the pelvis of the kidney was the seat of several little masses of fat, each the size of very small peas. Upon the exterior of the body there was a fair amount of adipose tissue; it was fully one-fourth of an inch thick upon the abdomen.

Dr. Danforth will append the microscopy of this case.

Microscopy.—The white blood corpuscles were largely in excess; many of the red corpuscles were shriveled, crenated, or otherwise deformed. The muscular tissue of the heart had undergone fatty degeneration, so that in some places the sarcolemma seemed to be filled with granular debris; other fibres were in the incipency of fatty degeneration—that is, in the stage of so-called “cloudy swelling,” while a few could be seen which were scarcely affected. The fatty change was evidently the result of a process of slow starvation, since there was no organic structural lesion of its valves, or of the great vessels. The tubuli of both kidneys were very extensively degenerated, the epithelial cells being loaded with fat and granular matter. I have no doubt that a more complete microscopic examination of the tissues of the body would have developed quite generally the degenerative changes which usually follow prolonged mal-nutrition. I made several ante mortem examinations of the patient's urine, and on each occasion found albumen abundant, and a profuse deposit of granular casts and fat-bearing epithe-

lium. It may, perhaps, be fairly questioned which was the primary disease, leucocythæmia or morbus Brightii; but the question cannot now be authoritatively answered.

I. N. D.

MENINGEAL AND PULMONARY TUBERCULOSIS IN AN ADULT.

By DR. J. H. WM. MEYER.

[House Physician to Cook County Hospital.]

Ellebert Leganger, a Norwegian silversmith, was admitted Dec. 16, 1876, suffering from tuberculosis and chronic pleurisy. While delirious, patient destroyed the record of his case.

An examination was made six hours after death, which occurred, Feb. 17, 1877. The right pleural cavity was found to contain about 3 quarts of light yellow fluid; the pleura was much thickened, and presented several strong bands of adhesion; the right lung was compressed to about one-third its normal size, and thickly studded, from apex to base, with milary tubercles; there was a small cavity in its apex.

On the left side, the two layers of pleura were adherent throughout; the left lung also was completely filled with milary tubercles. The dura mater, arachnoid and pia mater were greatly congested; arachnoidean cavity contained a very small amount of liquid. There was also a slight serous effusion into the ventricles.

Found a deposit of semi-transparent, gray tubercles along the course of the vessels, especially on the convex surface of the hemispheres; there was a similar deposit, slight in amount, at the base; vascular turgescence of the cerebral tissues, shown by the increased size of the puncta. A specimen of the lung tissue was submitted to Dr. Danforth for microscopic examination.

Microscopy.—The most prominent feature revealed by the microscope was the hypertrophied condition of the intervesic-

ular connective tissue, and the general infiltration in the small, shrivelled, irregular cells. In many instances, these cells were filled with pigment, and these pigmented cells were arranged in dense groups, or else stretched out into continuous lines or columns. In some places, they formed a continuous ring, surrounding the air vesicle, and infiltrating the intervacular connective tissues. The air vesicles were pretty generally deprived of their epithelium, but they were stuffed with a luxuriant crop of rather small, irregular, imperfectly formed cells.

The tunica adventitia of the blood vessels was thickened, and the arterioles were abnormally tortuous. I. N. D.

SCIRRHUS OF THE COMMON BILE DUCT.

REPORTED BY DR. NORMAN BRIDGE.

H. R. P., aged 65 years, American, a railroad conductor, a man of robust appearance; health generally good until the beginning of his last sickness. He was a good liver, and had, perhaps, as a consequence, an occasional diarrhoea. He had an erysipelas of the hand several years before death. An older brother died at 72 years of age, with cancer of the bile duct at the neck of the gall bladder.

His parents died of disorders not malignant, his mother from abscess of the lung following facial erysipelas.

Two and a half years before Mr. P.'s death he began to have spells of weakness and langor, at which times he would express himself as feeling that his "work was about done." These spells were of brief duration, and continued until one year before his death, when (spring of 1874) he caught cold and had some kind of a fever. He only partially recovered, was unfit for work, and lost flesh. He had pain frequently in the region of the liver and in the back. In August he went to Michigan for a visit of six weeks. While there he became deeply yellow with icterus—a condition that remained until his death. From November 1st, he was confined to his room.

He grew steadily weak and emaciated; anorexia was extreme; he would not eat—food appeased him and gave a feeling of distension of the stomach. There was no vomiting until within a week of his death, when it occurred frequently. A subjective feeling of enlargement of the liver had existed many months. A few weeks before death—and when the case fell into the hands of Dr. E. Ingals—there had appeared a considerable tumefaction in the liver, chiefly at the location of the gall bladder. By the localized prominence of the tumefaction, and by fluctuation, the mass was suspected to be an abscess. A day or two before death, however, a large quantity—one or two quarts—of bile and mucus was vomited, when the tumor was found to have disappeared. Death occurred May 3d, 1875.

The writer assisted Dr. Ingals in making a necropsy. The liver was somewhat enlarged and full of bile, that oozed from its cut surfaces. The gall-bladder was partially filled with bile having the usual appearance. A hard tumor, roundish, and not more than three-fourths of an inch in diameter, was attached to the common bile duct on its posterior aspect, and just above its entrance into the bowel. It appeared to have begun in the wall of the duct or the cellular tissue, just outside of it, and it had so encroached upon the lumen of the duct that it was with difficulty a small probe could be passed through the canal. The mass pressed slightly upon the duodenum, but it did not constitute an obstruction of that canal.

The other organs were normal. The tumor was found, on microscopic examination by Dr. Danforth, to be a scirrhous cancer.

Reported in June, 1875.

Selections.

SCLEROSIS IN SCATTERED PATCHES. BY PROF. CHARCOT, PARIS. TRANSLATED BY THOMAS OLIVER, M. B., PRESTON, WITH M. CHARCOT'S PERMISSION.

PART III. *Apoplectiform Attacks in Sclerosis in Patches*
—Periods and Forms—Physiologico-Pathology—
Etiology—Treatment.

I purpose to-day to call your attention, in the first place, to certain cerebral accidents which may arise and complicate the symptomatology of cerebro-spinal sclerosis in patches. The accidents in question are *apoplectiform attacks*, which sometimes occur repeatedly, and which occasionally terminate fatally. These attacks have not as yet occurred in Miss V., whose clinical history is otherwise so complete in many other respects; but nothing justifies me in affirming that they will not happen some day. Indeed, it is not a rare complication: I find it pointed out in about a fifth of the cases that I have collected, and I myself have, personally, observed it at least in three.

The aggregate of symptoms which characterize the attacks in question do not belong properly to multilocular sclerosis. They present themselves in a number of diseases which affect at once several points of the cerebro-spinal axis—in particular, progressive general paralysis. It is even in this last disease that *congestive attacks* (this name usually serves to designate them, at least in France) have been particularly studied in proportion to their frequency. In these attacks we meet them under the rather various forms which they may assume. Accordingly, the description of these attacks in progressive general paralysis has occasioned numerous divisions and subdivisions. But, in short, all the varieties of form which clinical observation has brought into notice (and here I only wish to consider attacks of some intensity) may be reduced, if I am not mistaken, to two fundamental types, that is—1st, *Apoplectiform attacks* (*pseudo-apoplexy* of English physicians);

2nd, *Convulsive or epileptiform attacks.* The characters of the two types may also be intermixed and confounded in the same attack. Only the first type has been met with, until now, in sclerosis in patches; but there is no doubt that observations relative to this affection, by being repeated, will one day enable us to complete the picture.

Among the other organic diseases of the nervous centres in which we frequently observe epileptiform or apoplectiform attacks, I shall confine myself to particularize certain old *focalized* cerebral lesions, accompanied by permanent hemiplegia. Such are *cerebral hemorrhage* and *softening of the brain*, when they have occupied regions of the encephalon, the lesion of which has for its immediate consequence an almost certain determination of cerebro-spinal affections, known under the name of *descending fasciculated sclerosis*.

Between these partial lesions of the brain and progressive general paralysis it seems, at first sight, as if there existed no point of contact. Here is, however, a character which brings them into relationship; the observations of M. Magnan and those of M. Westphal have shown that, in general paralysis, there is very often superadded to the lesions of periencephalitis a sclerotic degeneration, sometimes diffused, at other times fasciculated, which occupies at once the cerebral peduncles, the protuberance, the bulb, and certain regions of the spinal cord. Now, these cerebro-spinal lesions, as much from their mode of distribution as by the very nature of the morbid process, deserve to be assimilated to the descending fasciculated sclerosis consequent upon hemorrhage or softening of the brain. We know, on the other hand, that, in multilocular sclerosis, the sclerous patches occupy not only the spinal cord and the brain properly so-called, but, moreover, very generally various parts of the isthmus of the brain, and, in particular, the bulb. You see from this that the existence of irritative lesions scattered slightly everywhere in the cerebro-spinal axis, but always present in the isthmus, is a character common to all the affections, so dissimilar in appearance, to which are superadded the attacks called *congestive*. I shall draw your attention specially to the constant existence of bulbar lesion, which, in all likeli-

hood, is a predominant element in the production of these attacks.

Be that as it may, the case before us is one of permanent degeneration of a slow and progressive development. It consequently cannot explain, without the concurrence of other lesions, the development of accidents which are produced, as a rule, almost suddenly, and which may disappear very quickly without leaving any trace. I am aware that many physicians, even at the present day, represent as supervening here a partial sanguineous congestion, a fluxion which, according to the necessities of the cause, would affect such and such a part of the brain; I cannot, for my own part, subscribe to this hypothesis. To justify my scepticism in this regard, I would at first appeal to the memory of those among you who are attached to the service of the lunatic asylum. How many times have they not been disappointed in not meeting at the autopsy the congestive lesion on which they had reckoned? But I will appeal particularly to the observations which I have been able to collect in the usual sphere of my labors. Many a time I have seen patients die in consequence of attacks, either epileptiform or apoplectiform, who had been affected for a long time with hemiplegia from the fact of softening of the brain or intracranial hemorrhage. Well, in such a case, whatever attention I paid to the autopsy, it has always been impossible for me to discover, either in the nervous centres or in the viscera, a recent congestive or oedematous lesion, or any other capable of explaining the grave symptoms which had marked the fatal termination: I have never met with anything but old lesions—ochreous foci, yellow patches or centres of cellular infiltration—on which depended the hemiplegia and the secondary degenerations of the mesencephalon and of the cord, which are the consequences of these partial lesions of the hemispheres. I believe, in short, that in the actual state of science the absence of proper lesions is, anatomically speaking, a character common to those attacks, whatever may otherwise be the form which they affect and the disease with which they are connected.

As regards the symptomatology of the apoplectiform and

epileptiform attacks, (in order not to enter into the details of a regular description) I shall limit myself to the mention of the following particulars. The scene, in general, opens unexpectedly, without very marked antecedent symptoms; sometimes by a rapid and more or less distinct clouding of the intellectual faculties, and sometimes by deep coma supervening suddenly. There are added to this, in certain cases, convulsions which remind you of those of ordinary epilepsy, but which are nevertheless localized, as a rule, to one side of the body (*epileptiform attacks*). At other times, the convulsions are wanting (*apoplectiform attacks*). In both cases we frequently see developed from the beginning a more or less complete hemiplegia, sometimes with flaccidity, sometimes, but more rarely, with rigidity of the paralyzed limbs. The symptoms may abate progressively in the space of some days, and yet lead to death. This is announced in general by the rapid development of eschars in the sacral region. If, on the contrary, the patient is to survive, the disappearance of the accidental symptoms is not long in ensuing; the hemiplegia is the only symptom which persists still for a time, but it disappears, sooner or later, without leaving any trace.

The attacks are usually reproduced several times, generally after long intervals, during the course of the disease. As far as regards sclerosis in patches, they have been noted three times in the observation III. in the memoir of M. Vulpian, three times in the recorded observations of Zenker, and even seven times in that of M. Leo. These fits have always left behind them a notable and persistent aggravation of all the symptoms of the primary disease.

The sketch which I have just presented to you would be too imperfect, if I did not draw your attention to the disturbances of the circulation and of the temperature which, as a general rule, are manifested in the course of the attacks. The *pulse* is found always more or less accelerated; but, moreover (and

¹ A temperature of 38° C. is subfebrile, and is equivalent to 100.4° F. A moderately febrile state would be indicated by a temperature of 39° C. (102.2° F.): 40° C. (104° F.) indicates a highly febrile condition. Temperatures above this level are hyperpyretic, and are usually dangerous to life, *e.g.*, 42° C. (107.6° F.).

this is the important point), the *temperature* of the central parts rises rapidly: it may, in the short time closely subsequent to the invasion, reach 38° C., or even 39° C¹. Frequently, at the end of twelve or twenty-four hours, it rises up to 40° C., and maintains itself at this figure for some hours without any material alteration in the condition of the patient. But if the patient is to survive, the temperature soon rapidly decreases. A figure above 40° C. almost always brings on the fatal termination.

These modifications of the central temperature have been studied by M. Westphal in the epileptiform and apoplectiform attacks of *progressive general paralysis*: I have found them in the attacks which supervene in the case of patients affected by old hemiplegia consequent upon hæmorrhage, or softening of the brain. In order to give you more definite ideas upon this subject, I think it useful to present to you very briefly the details of two observations relating to cases of the last kind.

The first observation has reference to a woman aged thirty-two years, affected with a hemiplegia of the right side, dating from infancy. There was general atrophy, rigidity, and shortening of the limbs, and paralysis, as is generally seen in such cases. This woman was subject to epileptiform attacks. She was brought to the Infirmary some hours after the beginning of an attack more intense than usual. On the very evening of her admission the temperature was beyond 38° C., and on the following day it had reached 40° C. The fits became subintractant: they were repeated about a hundred times a day. Eschars rapidly formed in the sacral region, and death supervened on the sixth day. The thermometer introduced into the rectum stood that day at 42.4° C. At the autopsy we found on the surface of the cerebral hemisphere of the left side a considerable depression, corresponding to a yellow patch, the vestige of a vast focus of softening. The hemisphere was besides atrophied throughout. We were unable to discover any trace of a recent lesion either in the nerve-centres or in the viscera.

The second case is that of a woman of sixty-one years of age,

affected with right hemiplegia, consequent upon a cerebral hæmorrhage of two years' date. This woman had already experienced several epileptiform or apoplectiform attacks, otherwise *generally rather slight*. Two hours after the commencement of the symptoms, the temperature taken in the rectum was 38.8° C.—five hours later it rose to 40° C. On the following day, in spite of the cessation of the convulsions, the temperature was 41° C., and on the day after that (the day of death) it reached 42.5° C. Two ochreous masses were discovered at the autopsy, the one seated in the corpus striatum, and the other in the substance of one convolution. There existed no recent lesion capable of explaining the symptoms which had determined death.

It has not yet been granted me to follow day by day, and at various periods of the day, the evolution of the temperature in a case of *apoplectiform attack* supervening in a patient affected with *sclerosis in patches*. Nevertheless, we can gather from several observations partial results, which leave no doubt that, even under this point of view, things proceed in multilobular sclerosis exactly as in progressive general paralysis, and in cases of focalized lesions of the hemispheres. Thus the patient, whose history has been reported by Zenker, was seized towards the end of his life by an apoplectiform attack, followed by hemiplegia of the right side of the body. On the day of the attack, the pulse being 136, the temperature reached 39.6° C. On the following day the thermometer marked 40° C., and on the day after this the paralysis had improved, and the temperature again fell to the physiological standard. In the patient Nolle, recorded by M. Leo, an apoplectiform attack declared itself during the evening. Early on the following morning the pulse was 144, and the temperature was 38.5° C. This attack, the seventh which the patient had experienced, was destined to terminate in death during the night. In the case of N., whose history has been recorded, in my service, by M. Joffroy, five hours after the invasion of an apoplectiform attack, with incomplete loss of consciousness and general relaxation of the limbs, the rectal temperature was 40.3° C., and the pulse 120. On the following day the

apoplecticiform symptoms had disappeared, and, at the same time, the pulse as well as the temperature had returned to the normal state.

If I have dwelt at some length upon the modifications which the temperature undergoes, in the apoplecticiform and epileptiform attacks of general paralysis, and of some other cerebro-spinal affections, it is because, in my opinion, we find in them a character which can, in certain cases, be turned to profit in the diagnosis. It is not necessary, I think, to enter into long details to show how difficult it is in presence of a patient who has just been struck with apoplexy, with or without accompanying convulsions, to decide in accordance with the mere consideration of external symptoms, whether it is a case of *true apoplexy*, resulting from the actual formation of a cerebral clot from hæmorrhage or from softening, or, on the contrary, from a simple *congestive attack*. Now, the examination of the temperature of the internal parts would furnish in such an occurrence a fact decisive of the case. Indeed, I have demonstrated by repeated observations that in true apoplexy, principally when it is connected with cerebral hæmorrhage, the temperature constantly falls soon after the attack, and is maintained, generally during twenty-four hours at least, below the normal rate, even when there ensue and are repeated intense convulsive fits. Now, we have just seen that in the attacks called congestive, the temperature, on the contrary, rises from the commencement of the first symptoms beyond the physiological figure, and tends still to rise progressively during the fit.

Periods and Forms in Sclerosis in Patches.

After having considered one by one the various elements which compose the symptomatology of multilocular sclerosis when there is question of a complete case, and one which has already reached an advanced period of its course, it is expedient to show by a general survey how these elements are grouped together and connected with the various phases in the different forms of the disease. This latter does not present itself actually—far from it—clad in all its attributes at every epoch of its development. At the commencement, it may be

constituted only by the union of two or three symptoms, and, besides, there are cases in which up to the fatal termination, the delineation of the symptoms remains incomplete. Now, it is especially when the disease is still at a period near its commencement, or when it takes on an imperfect form, that it would be of consequence to be able to recognize it by the smallest indication.

I have proposed, in the progressive development of the malady, three periods: the first extends from the moment at which the earliest symptoms appear, up to the time when spasmodic rigidity of the limbs reduces the patient to an almost absolute impotence. The second comprises all the time (generally very long) during which the patient, confined to bed, or hardly able to take a few steps in his room, preserves, nevertheless the integrity of his organic functions. The third, in fine, commences at the moment when, at the same time as all the symptoms of the disease are aggravated simultaneously, the functions of nutrition suffer in a perceptible manner. *Apropos* of this last period, there will be occasion to notice the accidents which, in the usual order of things, mark the last period of the disease, and precipitate the fatal termination.

I. First Period.—The mode of invasion and the linking of symptoms present various aspects, which deserve to be pointed out to your special attention.

Sometimes it is cephalic symptoms which open the scene: thus, the patients begin by complaining of habitual vertigo, of diplopia more or less transient; gradually embarrassment of speech appears, and finally, nystagmus. The union of these symptoms would compose a group already characteristic enough, and one, which, even when the trembling caused by movements and the paresis of the limbs do not come sooner or later to be united with it, would yet allow of the diagnosis being established upon strong presumptions.

But such is not the commonest mode of invasion; most frequently it is the spinal phenomena which first appear; so much so, that during several months, and sometimes even several years, the patients may present no other symptoms than a weakening, a paresia, more or less marked, of the lower

limbs, tending to become aggravated in a slowly progressive manner, and to be extended to the upper limbs. In such a case, the situation of the clinical observer is necessarily one of the most difficult. For, to sum up, the paresia of the lower limbs is a very ordinary symptom, and one common to a number of various affections. It presents itself, however, in multilocular sclerosis, as you know, with some peculiar traits, which might perhaps point out the way. Thus, however marked it may be (setting aside the exceptional case in which the lesion would predominate in the posterior columns,) it is not accompanied by any disturbance of the sensibility, nor any appreciable change in the nutrition of the muscular masses; besides, there is ordinarily connected with it no functional disorder in the bladder or the rectum; in fine, it is not rare to see remissions produced, nay, even complete intermissions which have afforded grounds to hope for an ultimate cure. But it is clear that these indications, even with the concurrence of all the others, can only furnish information of rather a vague description. Certainty can hardly be attained, except where the special trembling, or some one of the cephalic symptoms, comes to be superadded to the spinal symptoms.

Thus far have I presented to you the invasion and the ulterior concatenation of accidents as slow and uniformly progressive. That, in effect, is by far the most frequent case; but it is important that you should know that, in certain circumstances (exceptional, it is true), the commencement may appear suddenly, unexpectedly, or be consequent upon some comparatively insignificant premonitory symptoms.

Thus the vertigo and diplopia having suddenly declared themselves, the paresia of the limbs and the stumbling may have been superadded to them at the expiration of some days, so that the malady is found, so to speak, at once established. This is what took place, among others, in the case of a young patient, Mlle. Vinch, whom some of you may have seen in our wards. At other times the beginning is marked, as in one of the patients of Valentiner, by a sudden invasion of paresia in one of the lower limbs; or, again, as in the case of M. Leo, and in one of my patients, whose history M. Vulpian has re-

ported; an apoplectiform attack, preceded for several days or several weeks by vertigo and cephalalgia, and followed by temporary hemiplegia, inaugurates the illness.

Lastly, there is a case to which I will again call your attention, and in which the beginning is marked by an affection which is most frequently considered accidental and extraneous to the leading malady, though, in my opinion, on the contrary, it is really connected with it by a link not recognized till now I allude to *gastric* or *gastralgie crises* (whichever you may choose to call them), which are sometimes intense, and accompanied by lypothemia, repeated vomiting, etc. They have several times opened the scene, and soon the usual symptoms of multilocular sclerosis have followed; besides, it is not unusual to see them re-appear at several successive periods, and be intermingled with the symptoms during the first periods of the disease. In this class, a case published by M. Liouville, and that reported by M. Zenker, are good examples to quote. These accidents are so much the more worthy of notice, as we shall find them again with almost the same characters in other forms of sclerosis of the spinal cord, and, in particular, in posterior fasciculated sclerosis (*locomotor ataxy*), chiefly, however, in the initial phase of this affection. The gastric crises, coinciding, or alternating with sudden flashing pains of the limbs, may be, in such a case, with diplopia, and perhaps a little titubation when the eyes are closed, the only actual symptoms of the disease in question, whose real character is at that time too often not recognized. These same gastric crises are met with, as we have observed (M. Duchenne, of Boulogne, and myself), in the form of *central subacute* or *chronic myelitis*, which produces the symptoms of *general spinal paralysis*. But I do not wish to dwell longer on this subject, which I expect to resume soon, and to give to it all the developments of which it is susceptible.

II. Second Period.—In general, from the end of the first period, multilocular sclerosis presents itself already marked by most of the symptoms which characterize it. These symptoms are aggravated and intensified during the second period, and there is superadded to them the spasmodic contraction of

the limbs, with or without the accompanying spinal epilepsy, in consequence of which the patients, who had till then been still able to walk more or less effectually unaided, find themselves thereafter reduced to an almost absolute impotence, and confined ultimately to their room, or even their bed. The contraction which characterizes the commencement of this period is a phenomenon almost always slowly developed; it hardly ever shows itself, in general, until two, four, or six years after the appearance of the first symptoms of mutilocular sclerosis.

III. Third Period.—The commencement of this last period is marked, as I have told you, by progressive weakening of the organic functions; want of appetite is habitual, and diarrhœa frequent, and soon there supervenes a general emaciation, which becomes more and more evident. At the same time, there is an aggravation of all the symptoms peculiar to the disease: the clouding of the intellect proceeds even to imbecility; the embarrassment of speech is carried to its height, and the patient no longer expresses himself except by an unintelligible grunt. Then the sphincters are paralyzed, and it is not unusual to see the mucous membrane of the bladder become the seat of an ulcerative inflammation. It is then that appear in the sacral region and on all points of the lower limbs submitted to prolonged pressure, eschars, which sometimes assume enormous proportions, and consecutively all the series of accidents which are connected with this complication, such as purulent inflammatory foci, purulent or putrid poisoning, etc. Death soon ensues.

Most frequently life is still abridged by the intervention of some intermittent malady. Pneumonia, caseous phthisis, and dysentery may be reckoned on as amongst the most frequent of these terminal affections.

I have reserved, so as to mention it in quite a special manner, the appearance of some symptoms of *bulbar paralysis*, because they may, by becoming aggravated, precipitate the course of events, and bring on a fatal termination, even before the phenomena of the last period have manifested themselves. At the same time, as the speech becomes more and more diffi-

cult, there is produced, in the first place, a difficulty of deglutition, which, transitory at first, soon becomes permanent. Then from time to time, there occur fits, more or less serious, of dyspnoea, and death may take place in one of these attacks. I have observed quite recently two cases which terminated in this way. At the autopsy, we recognized in both that a patch of sclerosis had invaded the floor of the fourth ventricle, where it united the points of origin of most of the bulbar nerves.

After the details into which I have just entered, it appears to me useless to undertake the particular description of the various *forms* that multilocular sclerosis may put on. The *cerebral* and *spinal* forms correspond to an incomplete invasion of the nerve centres by sclerosis; it is, if you like, the disease arrested in its development, in its progression, whether ascending or descending. The symptomalogical series is, so to speak, curtailed by it; but the symptoms, considered singly, are not on that account modified. The first form is very rare, the second frequent enough, on the contrary. The *cerebro-spinal* form, however, represents the normal type, and it is it we meet with most frequently in the clinique.

Cerebro-spinal multilocular sclerosis fully accomplishes its total development in the space of from six to ten years: that forms a new contrast with paralysis agitans, whose normal duration is much longer. The spinal form usually allows more respite; it may terminate only at the end of twenty years, or even at a still later period.

Physiologico-Pathology.—Etiology: Prognosis and Treatment.

To finish this study, it remains for me to speak of the physiologico-pathology, etiology, and treatment of multilocular sclerosis of the nerve-centres. Unfortunately, the documents which I shall be able to appeal to, relative to these various points, are few in number, and imperfect, too, for the most part. I shall be compelled in consequence to lay before you very summary remarks.

The reason of the very singular mode of distribution which the sclerous islets affect in the various parts of the central

nervous system is to us till the present completely unknown. Rindfleisch has affirmed that the point of departure of the formation of sclerotic foci is in the vascular system. According to him, inflammation of the walls of the little vessels which we meet with always at the centre of the patches in course of formation is the initial fact: from this central part the irritation is propagated to the reticulum of the neuroglia, and radiates in all directions. Evidently that would be again only staving off the difficulty. Besides, this predominant part accorded to the vessels in the evolution of the morbid process is anything but demonstrated. I am very much disposed to think, in accordance with my own observations, that the degenerations of the vessels, and those of the reticulum, advance *pari passu* in a parallel manner, and without influencing each other.

Be that as it may, given the seat of sclerous islets in the various departments of the nerve-centres, can we deduce from that the production of symptoms of which the aggregate constitutes the symptomatology of sclerosis in patches? It is possible, at least in part. We have already remarked that the want of motor co-ordination, the loss of knowledge of position, and the flashing pains which are observed in a certain number of cases, may be, in these cases, referred to invasion of the posterior columns of the spinal cord. On the other hand, the habitual predominance of the patches of sclerosis on the passage of the antero-lateral columns, accounts, as I will demonstrate to you soon, for the almost constant existence of the paresia or paralysis of the limbs, followed sooner or later by permanent contraction. Nystagmus and embarrassment of speech are in connexion with the habitual localization of the patches in the substance of the protuberance and bulb. But a great number of other symptoms are more difficult of interpretation. Such is, amongst others, the peculiar tremor which shows itself in certain attitudes of the body, and in the exercise of voluntary movements. I have expressed the opinion that the protracted persistence of axis-cylinders, when deprived of their sheath of myelin in the midst of the sclerotic foci, plays perhaps an important part here: the transmission of voluntary

impulses would still be effected by way of these denuded cylinders, but it would take place in an irregular spasmodic manner, and thus would be produced the oscillations which disturb the execution of intentional movements.

This resistance of the axis-cylinders is certainly not a phenomenon exclusively peculiar to multilocular induration, but it shows itself there more marked than in the other forms of sclerosis of the nerve-centres. It may, however, be appealed to, I think, for the slowness with which the paretic symptoms progress in sclerosis in patches, and for the long space of time that elapses before the period in which they give place to complete paralysis and permanent contraction.

What we know concerning the conditions which preside over the development of sclerosis in patches reduces itself to very little. It appears established, however, from the present, that the disease is much more common among women than among men. Thus, among the cases which I have collected in my early studies, three or four only concern men. The facts which have been published since then have not modified in any sensible manner this result. By combining with the eighteen cases which figure in the monograph of MM. Bourneville and Guérard, sixteen new cases, we have a total of thirty-four cases, of which nine were men and twenty-five women.

From these same documents, it results that it is a malady of youth, or of the first half of adult age. We have observed it in subjects aged from fourteen, fifteen, and seventeen years. But it appears most frequently to commence between the age of twenty and twenty-five. It rarely appears after thirty years. The age of forty years seems to be, on the other hand, the last limit that people affected with sclerosis in patches can attain.

With regard to hereditary influence, we would have to cite only a single example, in which it would appear to have played a certain part. This example has been communicated to us by M. Duchenne (of Boulogne).

In the pathological antecedents of the patients themselves, we have in general only very vague indications. Hysteria

figures among them in some cases; but most frequently we find mentioned only neuropathic accidents of no marked description—migraine from time to time, or neuralgia.

Among the *occasional causes*, we find several times pointed out the prolonged action of moist cold. In one case, the first symptoms were developed soon after a fall.

But it is circumstances of a moral kind which are most commonly referred to by patients. Prolonged grief, for example, that, among others, which an illegitimate pregnancy may occasion; or, again, the unpleasantness and weariness which a social position more or less false entails, such as is often that of certain governesses. This is what concerns women. As for the men, the case before us is for the most part of unclassed people, placed outside of the general current, too susceptible and badly armed to sustain what we call, in Darwin's theory, the *struggle for life*. That is, in fact, a somewhat vulgar etiology, and which we find, so to speak, at the origin of all chronic diseases of the central nervous system.

The *prognosis* until now is of the gloomiest description. Will it always be the same? We hope that when the disease is better known, the physician will learn to take advantage of these spontaneous tendencies to remissions which are found prominently marked in a great number of cases. Besides, we must not forget that, for the present, the disease is in general only truly recognised when the lesions are already very profound, and nearly inaccessible to the influence of curative means.

After the preceding, shall I go on to speak to you at length on the therapeutics? The time is not yet come when this question can be seriously approached. I can speak to you only of a few trials made up till this day, and of which the results, unfortunately, have been in general not at all favorable.

Chloride of gold and phosphide of zinc appear to have rather exasperated the symptoms. *Strychnia* has sometimes made the trembling cease, but its influence has always been temporary. I shall say as much of the *nitrate of silver*. In several cases which I have observed, it appears to have had upon the trembling, and upon the paresis of the limbs, a very

favorable influence, but one which, in truth, has not been long maintained. A formal contra indication to the employment of this medicine would be the existence of permanent contraction, and, above all, of spinal epilepsy. The employment of silver nitrate would, in fact, almost certainly have for its result exasperation of these symptoms. *Hydrotherapia*, in one case, seems to have produced a transient impression; in another, on the contrary, it has completely failed.

Arsenic, belladonna, ergot of rye, and bromide of potassium, have been equally administered in sclerosis in patches without any marked benefit. I will say as much for the application of *faradization*, and of the employment of the *continuous current*. But, with reference to this last agent, it is important to have recourse to new experiments before delivering a decided opinion on the question.—*Edinburgh Med. Journal*, Oct. and Nov., 1876.

Clinical Reports.

COOK COUNTY HOSPITAL.

MEDICAL DEPARTMENT.

CASES REPORTED BY J. H. WM. MEYER, M. D., (HOUSE PHYSICIAN).

Phthisis Pulmonum, Erysipelas, Meningitis.

H. Anderson, a Norwegian, cabinet-maker, aged 62, was admitted to the hospital, Jan. 26, 1877. He had long suffered from cough, and pain in his chest; expectoration of a thick, tenacious sputum, at first white, subsequently yellow; emaciation, night-sweats, and other features of consumption.

Physical examination revealed depression below right clavicle; diminished respiratory movement of that side; dullness, broncho-vesicular breathing, bronchophony, and increased vocal fremitus over the upper lobe of right lung. Appropriate treatment was ordered.

On Feb. 8th, there was apparent a red, glazed swelling of the face, presenting several blebs; tenderness to the touch; patient had been delirious the previous night. He was directed to take a saline laxative, and a powder containing quinine and opium; also to make a local application of camphorated oil. In the evening he was rational, but became delirious again during the night. On the following morning (Feb. 9), he was ordered the tinct. ferri chloridi, in half drachm doses, four times daily.

On the 11th, the redness was evidently fading; ung. zinci oxidi was substituted for oleum camph.

By the 13th, desquamation was well established over the entire face, but patient was almost constantly delirious.

Death occurred at 5 A. M., Feb. 15th.

An examination was made six hours after death.

On penetrating the skull and dura mater, about two ounces of serum escaped; the arachnoid was found to be covered with lymph; the pia mater injected; between the convolutions were shreds of lymph. The upper lobe of the right, and the lower lobe of the left lung were infiltrated with yellow, caseous matter.

Phthisis and Bright's Disease.

Ph. Conway, aged 27 years, cooper, was admitted, Nov. 15, 1876.

General health of patient has been good, till about three years ago. As far as known, there is no hereditary predisposition to consumption. Has not been in the habit of drinking to excess.

Three years ago last spring, he took cold, and had severe pain in the chest, extending through the shoulders. Six months later, he had a hemorrhage from the lungs, losing considerable blood. Expecterated blood, and coughed a great deal, at varied intervals, all that winter. He would expectorate about half a teacupful of blood at a time, but at one time lost about a pint. He steadily declined in health, till about two years ago, he was obliged to give up work. Appetite has been very poor; bowels generally costive. Had

night-sweats. Three months ago, patient noticed that he was making more than the normal quantity of urine, and the amount has increased up to the present time. He now voids during the night about a gallon of porter-colored urine. Has had for the last three months a heavy pain in the region of the kidneys. Drinks a great amount of water. Last June, his feet began to swell; if out of bed, the swelling would be greatest in the evening; while in the morning, the feet were smaller again.

No tumefaction has ever appeared in any other region.

On admission, patient very much emaciated; voice hoarse; face sallow. There is an anæmic aspect of the skin, and visible mucous membranes. The tongue is tremulous, and coated whitish. Appetite poor, but has great thirst; bowels costive, but has a frequent desire to urinate, especially at night.

Complains of pain in chest and back. Feet pit on pressure.

Examination of chest: over left upper region anteriorly, dullness on percussion with broncho-vesicular respiration, bronchophony, depression below the clavicle, and diminished respiratory movements on that side; some mucous râles.

Examination of urine shows S. G. 1003. Heat and nitric acid give deposit of albumen. Ordered ferri et quiniæ cit. gr. v four times a day, and cod-liver oil after meals.

Nov. 25th—Patient sits up in bed most of the time; he cannot breathe in the recumbent posture.

Dec. 15th—Complains of some diarrhœa. Ordered milk diet.

Dec. 25th—Vomits some; bowels are quite loose. He has no œdema, but is very thin.

• Feb. 5th—Urine slightly acid, pale yellow, and viscid. After standing, a light, whitish, flocculent precipitate falls; copious deposit by heat and nitric acid.

Feb. 6th—Profuse diarrhœa. Ten passages last twelve hours.

R Plumbi acetatis.....gr. i.
Pulveris opii.....gr. j.

every four hours.

Feb. 13th—Died.

Feb. 16th—Could not make a complete post mortem, but managed to get the kidneys, which were small, smooth, weighing $8\frac{1}{3}$ —one, $4\frac{1}{3}$; the other, $4\frac{2}{3}$. Capsule firmly adherent; on section, thickness of cortical substance diminished.

SURGICAL DEPARTMENT.

(REPORTER C. F. FENN, M. D.)

Urinary Fistula Opening in Scarpa's Triangle.

In the Surgical Clinic of the 14th March, Prof. Bogue presented an unusual case, on which he performed the operation of cystotomy for the cure of a urinary fistula, which had its external opening on the inner aspect of the thigh. The history of the case is briefly this: A man, 55 years of age, having a light occupation and previously good health, began to have more or less pain within the pelvis on the right side. Eventually there was a considerable discharge of pus from the bladder.

After several weeks of disquiet of this kind, a small tumor suddenly appeared in the right groin. Its development was from beneath Poupart's ligament, like that of a psoas abscess. It continued to grow and to descend until it reached the apex of Scarpa's triangle. When first examined, two months ago, there was a smooth fluctuating tumor four inches in diameter at the base, and an inch and a half in elevation. Its appearance was precisely that of a cold abscess, the surface having become red and inflamed from friction or from the uniform weakening of its walls. That this was a collection of pus from a distant source, seemed to be the only conclusion possible. When the tumor was lanced, urine, instead of pus, came forth. The walls of the cavity collapsed, and the punctured opening remained as the outlet of an urinary fistula. Observing the patient after this, it was found that the act of evacuating the bladder in the usual way occasioned also a flow

of urine through the fistula. If the bladder became filled at any time, the flow by the fistula was involuntary: but as long as any considerable accumulation of urine was prevented by frequently voiding the bladder, the flow of urine by the abnormal channel was limited to the time of micturition.

The operation of cystotomy was performed in order to allow the valvular opening or diverticulum to heal that must have been produced in the course of previous abscesses within the peri-vesical cellular tissue.

The operation resulted in the discovery and removal of a smooth ovoid calculus, weighing about one drachm, which was imbedded in an ulcerated cavity in the prostate gland.

PRIVATE SURGICAL PRACTICE.

CASES OF INTERNAL HÆMORRHOIDS—OPERATIONS BY THE CLAMP AND ACTUAL CAUTERY.

UNDER THE CARE OF JNO. E. OWENS, M. D.

CASE 6. Mrs. —, aged 47 years, came under my care for internal hæmorrhoids, March, 1874. She is the mother of nine children, the last of which was born in September, 1872, and lived but a few days. This lady, in consequence of the rectal disease, had been for some years an invalid, and totally unable to attend to her household duties. Exhausting pain and hemorrhages rendered life itself burdensome. Frequently overwhelmed with gloomy forebodings, and always exhausted, she was absolutely compelled to withdraw from the society of a very large circle of acquaintances. Having had the professional care of herself and family for a considerable time, I took advantage of many opportunities during the last two years of her suffering, to induce her to submit to an operation for the radical cure of her disease. After very many so-called cures had failed, as they always do in such cases, she submitted to the operation. The first symptoms, preceded by a troublesome constipation, occurred about fifteen years ago, two months

after the birth of a child. Her parturition on this occasion was normal, and her "getting up" was good. Exercise and cold increased her suffering. Eleven years ago, the affection became very troublesome. Even a moderate walk was sufficient to bring on "an attack of piles." During the last eight years, hemorrhages which, prior to this period, had been moderate, became at times profuse, the loss of a teacupful of blood having been of common occurrence. Eighteen or nineteen years ago, a period began and extended over eight years, during which she did not menstruate—doubtless owing to pregnancy and lactation. Four children, born during this time, were nursed as follows: One, eighteen months; one, one year; and the third and fourth, two years each.

A few external hæmorrhoids were the first to attract her attention. These inflamed and ulcerated many times, and when in this state, caused even more suffering than the internal piles. The latter always came down after stool, but usually returned without difficulty. There was also some prolapse of the rectum. Pain and soreness were constant. The former, located for the most part, in the lower part of the back, was more intense about the rectum, but extended somewhat towards the front. Constipation was not troublesome during the last five years, owing to the ability of the patient to guard against it. The loss of blood was a serious drain upon the patient's vital powers. After an attack the eyes were weak and tearful. The patient looked much older than she really was, and spent much of her time in bed. One of the internal tumors, called "perineal," on account of its being located in the anterior segment of the rectum, contiguous to the perineum, was the most troublesome to the patient. It was always the first to prolapse; it was frequently the only one that came out, and was, from its location when out, the most closely encroached upon by neighboring parts. From such causes, this variety of pile is generally the most painful. Ether having been administered the clamp and canterbury were applied to four internal hæmorrhoidal tumors, March 16, 1874. Several external piles were removed with scissors, and the sphincter muscle was "overdistended."

March 18. The swollen mucous membrane began to roll from the anus, and on March 20th, it had reached its acme, being about the size of an English walnut. Pain on 18th and 20th called for morphia.

March 21. Alvine evacuation in response to syr. senn. comp. ¹ and an injection of warm sweet-oil.

Cotton saturated with the following lotion was applied to the swollen mucous membrane: Ext. belladonnæ, grs. iv.; ext. opii, grs. vj.; liq. plumbi subacet. dil, i℥.

March 25. Following an evacuation, the pain continued from one to two hours. After trying various laxatives, I found the following to act quite comfortably: Ext. colocynth, ext. hyocyam. aa grs. xvii.; ext. nucis vom, grs. iii.; Make 12 pills. S. one, two or three times daily, if necessary. Injections of warm sweet oil were advantageous.

March 29. Bowels move without pain.

March 30. Bowels move without the aid of medicine; patient up to-day—two weeks from the day of the operation; liberal cold water bathing of the anus, and when necessary a warm water enema.

March 31. Menstruating.

April 2. Able to ride out.

April 7. Rode out; patient is free from all discomfort, and expressed herself as feeling better than she had done for a number of years.

March 1, 1877. Patient is perfectly well at this date.

CASE 7. Mr. —, aged 35 years, had suffered from internal hæmorrhoids for nine years. Prof. De Laskie Miller, the family physician of this gentleman, referred him to me for operation. The patient is of the opinion that the hæmorrhoids were the result of straining at stool, having been unwilling to spare sufficient time from business for defecation. During the last three years of their existence, the piles, together with a portion of the rectum, prolapsed at stool, and could only be replaced by pressure and other manipulation. For a month preceding the operation, the pain was excessive, and it often required upwards of a half hour to return the protruded mass. During his efforts at replacement, the patient found it necessary

1. One part fluid ex. senna, three parts syrup.

to assume various positions, namely: on his back, on one side or the other, the legs and pelvis elevated, etc. Certain days he was obliged to leave his business from twenty to twenty-five times, in order to effect a reduction of this bleeding and painful protrusions. Pain was, more or less, severe for four or five years, but he had hemorrhage frequently during nine years; three years before the operation the blood began to run in a stream; at times he noticed several streams; more lately, he had hemorrhages daily for five or six days. Two week's freedom from hemorrhage was a rare occurrence. After some of his hemorrhages, the pulse beat reached 120. Being a man of much pluck, however, he put in a daily appearance at his place of business. He was frequently annoyed by cramps in his intestines; a sense of fullness in the top of the head, and a peculiar sensation in the eyes, almost invariably foreshadowed "an attack" and a hemorrhage. The protruded mass, frequently equal in size to half the first, grasped by the sphincter muscles, was productive of an agony, from which the patient was eager to be relieved at any cost. "An attack" was almost invariably the penalty paid for an indulgence in alcoholic stimulants. Anæmia and debility were prominent symptoms.

OPERATION.—The patient having been ætherized, Sept. 25, 1875, I made seven applications of the clamp and actual cautery. The part was very generally hemorrhagic, and bled freely, even upon careful manipulation. The mucous membrane in patches presented a granular appearance, and in addition to the larger tumors, small granular masses gave out even upon puncture a liberal and persistent flow of bright arterial blood. These latter are described as capillary hæmorrhoids. Two of the tumors, together with the redundant mucous membrane, were so large at their pedicles as to extend somewhat beyond a clamp of the largest size. After dealing with the tumors, other portions of diseased surface that bled was seared. One of the larger tumors was quite solid, and creaked when cut with scissors. A dose of deodorized ti. opium (grs. xx.) was ordered by Dr. Miller. The patient was much annoyed, and was kept awake by a frequent and painful

contraction of the sphincter. All hemorrhage had ceased when the rectum was returned.

HEMORRHAGE.—In two hours after the completion of the operation, I was summoned to see the patient. Nauseated by the æther, he had been vomiting; straining to move the bowels and tossing over the bed in a more or less violent manner. He was under the impression that the bowels had moved, but clots and fluid blood in large quantities had been voided. The bed clothing having absorbed the fluids discharged, the patient was covered with blood from head to foot. I sat by him and introduced ice suppositories for two hours. There was no return of the bleeding.

There was suppression of urine for thirty-six hours after the operation; the sixth day after operation, bowels moved copiously in response to castor oil.

From two to four grains of opium daily were required to allay pain, and to produce constipation.

Oct. 3. Bowels moved with but very little pain, in response to "bitter-water."

Oct. 4. Patient up to-day, about twenty minutes; instructed to secure a daily evacuation of the bowels by injection; patient up every day from this date.

Went down stairs on the 18th day; went out the 20th day; went to business on the 22d day, to remain a few hours.

REMARKS.—The clamp should be used so that the tissues to be canterized shall not project beyond the end of the clamp. In this operation, the tissues of two of the tumors thus projected, and this, together with the straining, and other violence above referred to, was probably the cause of the hemorrhage. The sphincter muscle was not overdistended in this case, and hence the annoyance occasioned by its frequent spasmodic action. Even liberal doses of opium were insufficient to entirely avert this painful spasm. The more the parts contained within the grasp of the muscle are swollen, the more do they encroach upon the muscle, which resents such encroachment by painful contractions. By thoroughly "overdistending" the muscle at the time of the operation for the hæmorrhoids, this source of suffering may be avoided.

Patient is perfectly well at this date, March 12, 1877.

Reviews and Book Notices.

THE SURGERY SURGICAL PATHOLOGY AND SURGICAL ANATOMY OF THE FEMALE PELVIC ORGANS, In a series of colored plates taken from nature, with commentaries, notes and cases. By *Henry Savage, M. D., London, F. R. C.S.*, One of the Consulting Medical Officers of the Samaritan Hospital; third edition, revised and greatly enlarged; an additional plate, also thirty-six wood engravings, with special illustrations of the operations on vesico-vaginal fistula ovariectomy and perineal operations. Philadelphia: Lindsay and Blakiston. 1876.

(For sale by subscription by *W. T. Keener*, Chicago.)

This elegant work has reached the third edition, a sure evidence of its great value to the profession. In this edition the anatomical plates are executed in the same beautiful manner as those of the two preceding editions. The accuracy of these plates connected with the lucid and comprehensive description accompanying them, render the book of Dr. Savage a useful guide to the student, and an acceptable office companion to the special practitioner.

While we willingly accord to it the highest praise as a work on the anatomy of the female pelvic organs, we must say that the surgery and surgical pathology of these organs are rendered in a very superficial and unsatisfactory manner. We believe in fact, the book would have done more credit to the author if he had confined himself to the anatomical features of the work so admirably given by him. While all the purely anatomical illustrations are excellent and instructive, a part if not the whole of the surgical and pathological plates are weak and tame in their effect, and some of them puerile. As one of this kind, we instance figure 1, in plate 14. About the only thing this figure illustrates is the utter impossibility of showing the operation for vesico-vaginal fistula to a class of students in their seats.

Notwithstanding these defects, the good qualities of "Savage

on the Female Pelvic Organs," will continue to make a demand for the book.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY
OF MARYLAND, AT ITS 78TH ANNUAL SESSION. HELD AT
BALTIMORE, APRIL, 1876.

After the usual record of business, the address of Dr. Roberts Barthalow is given. His topic, the degree of certainty in therapeutics, is one interesting to all thinking medical men.

Dr. B. believes it to be criminal for any practitioner of medicine to be an unbeliever in the positiveness of therapeutic effects. He cites in support of his argument the effect of numerous remedies in certain forms of disease, as the specific effect of quinia in malarial fevers, and of twenty grain doses of this medicine arresting an acute inflammation; the antidotal power of mercury in constitutional syphilis; chloral as a soporific; morphia as a curer of pain.

Dr. Johnston gives quite an interesting record of cases of transfusion, and an operation to relieve vesical ectopic deformity. The patient, a boy, was eight years old. "The umbilicus was wanting, as were the pubic bodies; a deeply red oval area of oozing mucons membrane in the supra-pubic region represented the bladder; the small pores at its lower part were the opening of the ureters; the penis was split as if horizontally, and the urethra reduced to an uncovered groove, continuous with the vesical membrane.

Below was a small scrotum provided with diminutive testicles; while above, on either side, an inguinal hernia swelled with every effort of the subject. The red bladder measured $3\frac{1}{2}$ inches in width by $2\frac{1}{2}$ inches in height, with ample space above to the xiphoid cartilage.

On the 22d day of January, 1876, the operation was performed. A great umbilical flap was brought down over the bladder, the skin surface lying under, and this was covered by two wing flaps, one from either groin, which met in the middle line, and were secured to the first oblong flap. The space left by the umbilical flap was almost effaced by drawing together the integuments of opposite sides, and

which had been dissected up; while the spaces left by the wing flaps were obliterated by a gliding of the skin which lay beyond the groins, made free underneath and attached to the outer wing flaps, now fixed in their new situation by silver and iron wire. As tension strained the lateral flaps, a crescentic incision was made beyond each groin to reduce it.

In about five weeks, he was able to return home greatly benefited, the operation having proven a success, perfect with the exception of a small loss of substance at the lower edge of the umbilical flap. In its present condition, the child will remain until cicatrization shall have completed its contraction, whereupon a second operation will be attempted, having for its object the formation of a sort of roof for his urethral groove.

As things are, however, the urine escapes over and around the penis only, and he is able to wear advantageously a railroad urinal."

Dr. Van Bibber gives some cases of abdominal disease, one of which is very interesting. The case was first supposed to be one of constipation, but the various cathartics proving inefficient, Dr. V. was called in consultation, when the diagnosis of intestinal obstruction was made. Electricity was now tried. A strong Faradic current was passed over the abdominal muscles. The operation was prolonged, with the full strength of the battery, for fifteen minutes. This being tried the second day, and proving ineffectual, an effort was made to insert a long tube beyond the sigmoid flexure of the colon. Whilst making the exploration for this purpose, Dr. V. detected lying in the hollows of the sacrum, a tumor, which felt like a bundle of intestines in a scrotal hernia. The diagnosis then made, was that a portion of the small intestines had fallen into the pelvis, and was there retained, thus causing the obstruction. An effort to inflate the intestinal canal with oxygen gas, was a failure, and the patient died soon afterwards.

In an autopsy, 36 hours after death, it was found that a portion of the ileum had been drawn into the pelvis during a previous attack of peritonitis, and was bound there by strong bands of lymph.

Dr. Gibbons reports a case of empyema cured by thoracocentesis.

A report on obstetrics by Dr. Erich speaks highly of the use of fifteen grain doses of quinia to accelerate the contractions of the uterus in lingering labors.

Of the obstetrical binder, he says in case of post partum hemorrhage, it will change an internal, and consequently, concealed hemorrhage into an external one.

Dr. Conrad gives a carefully prepared article on Insanity, in its financial relation to the state.

This little volume contains much that is interesting, and most of the papers are excellent. The print, paper, and proof-reading are all good.

W. H. M.

YELLOW FEVER AND MALARIAL DISEASES, embracing a history of the Epidemics of Yellow Fever in Texas; new views on its diagnosis, treatment, propagation, and control; descriptions of Dengue, Malarial Fevers, Jaundice, the Spleen and its Diseases, and Diarrhoea Hemorrhagica; with practical remarks on their successful treatment, etc. By *Greensville Dowell, M. D., etc.* Philadelphia. 1876.

This book is an octavo of upwards of 240 pages. Its lengthy title indicates the scope of the discussion it contains. The discussion is everywhere searching and thorough. On Yellow Fever, Dr. D. speaks with authority, having treated over two thousand cases of this disease. Many of his ideas as to the pathology of the affections discussed are original, but hereafter no thorough study of these disorders as they occur in the South, can omit the work of Dowell, which must be stamped as standard.

BOOKS AND PAMPHLETS RECEIVED.

- Mothers and Daughters. Practical Studies for the Conservation of the Health of Girls. By T. S. Verdi, A.M., M.D., etc. 1877.
- The Medical Men of the Revolution, with a brief history of the Medical Department of the Continental Army. Containing the Names of nearly 1200 Physicians. An Address before the Alumni Association of Jefferson Medical College, 1876. By J. M. Toner, M.D. 1876.
- Remarks on Intra-Uterine Polypi, etc. By A. Reeves Jackson, A.M., M.D. 1876.
- Milk-Sickness. A Paper. By W. H. Philips, M.D.
- Second Annual Report of the Board of Health of Georgia. 1876.
- Valedictory Address, etc., Hahnemann Medical College and Hospital. By G. A. Hall, M.D., etc. 1877.
- Transactions of the Thirteenth Annual Meeting of the Ohio State Medical Society, held at Put-in-Bay. Cincinnati. 1875.
- Seventh Annual Report of the New York Ophthalmic and Aural Institute. New York. 1877.
- An Essay on New South Wales, the Mother Colony of the Australias. By G. H. Reid. Sidney. 1876.
- The Use of Uterine Supporters. By Clifton E. Wing, M.D. Boston.
- Pneumatic Pressure and the Genu—Pectoral Posture in the Reduction of Uterine Luxations. By A. Sibley Campbell, M.D.
- On the Importance of the Uterine Ebb as a Factor in Pelvic Surgery. By Horatio R. Storer, M.D. Boston.
- The Relations of Medicine to Modern Unbelief. A Valedictory Address by R. O. Cowling, M. D. Louisville.
- Report of the Fifth International Ophthalmological Congress held at New York, Sept. 1876.

Correspondence.

SAN FRANCISCO, March 15th, 1877.

EDITOR JOURNAL AND EXAMINER:

Dear Doctor:—In the March number of your excellent JOURNAL, is a reference to an article of mine in the *Pacific Medical and Surgical Journal* for January, on the use of tincture of iron in Diphtheria, in which I am represented as saying that an adult patient should get from half an ounce to an ounce in twenty-four hours. By referring to the article you will find my language to be as follows: "From half an ounce to an ounce should be administered in twenty-four hours—the smaller quantity mentioned for a child of two years, and the quantity increased for older children." I am also quoted as advising as a substitute in case of the rejection of the tincture by the stomach, the tartrate of potassa. My proposed substitutes was the *citrate or potassio-tartrate of iron*. Further, the statement is attributed to me, that usually twenty-four hours of the iron treatment will suffice. Frequently, not usually, was my expression; and I added, "My belief is that in from twenty-four to forty-eight hours the system becomes saturated with it, and that smaller doses are then requisite, or that it may be suspended and chlorate of potash and muriatic acid substituted." I have thought these errors of sufficient importance to induce me to ask the favor of their correction.

Yours truly,

H. GIBBONS.

Obituary.

DR. HEINRICH OTTO GAETJENS died at Denver, Col., on February 26th, 1877.

Dr. Gaetjens was born January 13th, 1838, in Hamburg, Germany, where he received a thorough collegiate education. In 1858 he went first to Wuerzburg, then to Goettingen to study medicine; at the latter university he graduated in 1863, and the following year he passed a very rigorous examination at Hamburg, to receive the appointment as assistant-surgeon to the city hospital. That position he most efficiently filled till, in 1869, he left for this country. In October, 1869, he arrived at Chicago, and took his residence on Sedgwick street, where his knowledge and skill, his kindness and unassuming manners, soon won for him the confidence of the people and the friendship of his confrères. In 1873 he participated in the founding of the German-American Dispensary. But in 1875 his health began to fail; a severe bronchitis with hæmoptysis inaugurated a rapid development of tuberculosis. He gave up the practice to seek relief and recovery, in Denver, where he died. According to his will, his remains were brought to this city, and buried in Graceland Cemetery, March 4th.

GUSTAV G. GOLL died in Chicago on the morning of the 29th of March. He graduated at Rush Med. College, in 1871, and has, ever since, been a very active practitioner, striving for practice and reputation. His promising career was suddenly closed by an attack of pneumonia.

Medical News and Items.

Sir William Fergusson, the distinguished English surgeon, died February 10th.

Dr. Gurdon Buck, well-known especially for his achievements in autoplasic surgery, died at New York, March 6th.

With the deepest regret we inform our readers that Prof. J. W. Freer, President of the Faculty of Rush Medical College, has been seriously ill the past two weeks, and is now in so precarious a state, as to give rise to the greatest anxiety.

Two new journals have reached us. *The Toledo Medical and Surgical Journal* and *The Quarterly Journal of Inebriety*. The former is a monthly, and Dr. Jonathan Priest is the editor. The latter is the official organ of the American Association for the Cure of Inebriates, and the first number does the projectors credit. It is under the management of Dr. T. D. Crothers, Binghampton, N. Y.

At the New York Ophthalmic and Aural Institute 4,709 patients were treated during the past year; 3,873 for diseases of the eye, and 836 for diseases of the ear. From the time this charity was opened, May, 1869, to the 31st of December, 1876, 28,191 patients have been treated in the dispensary, and 2,205 admitted to the house; and 3,130 operations have been performed during that time.

The Central Free Dispensary of West Chicago received, a few days ago, a generous donation of twelve cases of extract of malt with iron, cod liver oil, and pepsine, from Tromers Extract of Malt Company.

The *Alumni of the County Hospital* held their annual re-union, March 21st, in the amphitheatre of the new hospital. About twenty gentlemen attended this pleasant meeting, to renew the old acquaintance with the air and diet of the hospital.

At the last quarterly meeting of the Michigan State Board of Health, Prof. R. C. Kedzie read an interesting report on the quality of illuminating oils in use in Michigan. The professor, by the advice of the Board, had visited Cleveland in order to examine the methods of refining the crude petroleum to make illuminating oils. His investigations established the following facts: That to manufacture good oil which will stand the test required by the Michigan law for inspection, requires either extra care and expense in refining, or it takes what is called the "heart of the run." This is done, in the case of what is known as "Water White Oil," which is transparent, burns with a clear bright light, and does not become opalescent by exposure to a temperature of 32° F. But to dispose of the inflammable products and still furnish an oil which will stand the Michigan test, the refiners run into the low-test oil the waxy and tarry products, paraffine, etc., which are not readily combustible, and which raise the standard of the low-test oils, rendering them capable of standing the test, but of poor quality for lighting purposes. Among the specimens exhibited was four ounces of paraffine taken from one quart of oil. The presence of a large amount of paraffine has a tendency to gum up the wick and render it incapable of supplying oil to the flame. Dr. Kedzie found that the "Water White Extra" would flow through 93 millimetres of tube containing wicking, and burn freely, while the "Michigan Test,"

or the oil that contains so much paraffine would flow through only seven millimeters. The action of sunlight upon oil spoils its burning qualities. It develops in the oil a quantity of tarry matter. Two specimens of oil, drawn from the same barrel, one of which had been exposed to the light for a few weeks, and the other kept in an opaque bottle, were exhibited. The one exposed to the light was decidedly yellow and clouded, while the other was still white and transparent. If the test could be extended to ascertain the amount of paraffine present, and rejecting such oil as contains it in amounts which impede the capillary action of the wick, or render the oil hard or waxy in cold weather, it might do very much towards removing the difficulties of which the people complain. The best test which he could now propose for this was: the oil should remain clear when its temperature was reduced to 32° F.

LIBRARY OF THE MEDICAL PRESS ASSOCIATION. *A Card from the Librarian.*—The Library has been removed to its new quarters at 188 South Clark street, room 9. It will be kept open, in charge of a competent assistant, from 10 to 4 o'clock daily, except Sundays.

The *Index Rerum* of periodicals, reports and transactions, is sufficiently advanced to be very useful for purposes of reference, and its usefulness will increase month by month as it is made more complete.

Donations of books, pamphlets, and papers, are earnestly solicited.

The following rules for the government of the Library have been established by the Board of Directors:

1. No books shall be allowed to be taken from the library room.

2. The use of the library is restricted to members of the Association; to physicians who pay five dollars annually for the privilege; to visiting regular practitioners from abroad.

NORMAN BRIDGE, *Librarian.*

The eighteenth annual commencement of the *Chicago Medical College* took place at Plymouth church, March 20. Prof. N. S. Davis delivered the address to the graduates, in whose behalf G. O. Rutledge responded. The degree of M. D. was conferred upon the following gentlemen: John P. Bading, Elizur K. Bailey, Frederick A. Beck, Victor A. Bergeron, Charles D. Boardman, George W. Bothwell, James Brooks, James Brown, Justin H. Burdick, Robert A. Carson, George P. Chenoweth, Edgar V. Dales, Charles S. Dickson, Sam. F. Farrar, George F. Fleischman, Lucius F. Foote, Gustavus H. Gray, Truman A. Hand, Theodore F. Johnson, Charles D. Jones, William H. Kirby, Nathaniel S. Lane, Edwin R. Love-see, Frederic L. Marcotte, Isaac McComb, Henry H. McGray, Frank P. Nourse, Hiram L. Pease, Joseph I. Pogue, George W. Pratt, John G. Reid, George O. Rutledge, Frank F. Safford, Frederick Schoop, Frank W. Searles, Gustavus A. H. Sienank, Edward H. Webster. Ad eundem degree upon Isaac L. Potter; honorary degree upon Julius A. Freeman.

Recent German medical journals contain reports of cases of pemphigus acutus neonatorum which have appeared in several of the clinics, and in private houses, particularly in the practice of midwives. This disease seemed to cling to the practice of midwives with stubborn tenacity, as is shown by a long array of facts and cases reported by Dr. Dohrn. The vesicles were in some instances few in number, but in others the erythema was considerable. In one child that died, the eruption of vesicles was so extensive that those persons who saw it declared that the appearance of the corpse was horrible, almost the entire body being covered with atheromatous crusts. In most cases no fever attended the eruption, and the general health of the children was not visibly influenced. The midwives in whose practice cases were appreciably appearing, were advised by the physicians of Wiesbaden to observe the utmost cleanliness, to use disinfecting washes, to change their

clothing, to visit the well children before the sick, and to use the thermometer to carefully determine the temperature of the children's baths—and yet the disease continued to spread. Dr. Dohrn advised the midwives to quit practice for four weeks, and this effectually checked the progress of the disease, as was shown by careful statistics.

MEMOIR OF DR. BENJAMIN RUSH. Doctor Rush was born on a farm 13 miles from Philadelphia, on the 24th of September, 1745. At the age of 9 years he was placed under private instruction, and so remained until he was 14 years of age, at which time he was sent to Princeton College, receiving the degree of Bachelor of Arts from that institution in his 17th year. Subsequently, he took up the study of medicine under Dr. John Redman.

Having remained 6 years with Dr. R., and also having prosecuted his studies with great diligence and success; translating in the meantime, "Aphorisms of Hippocrates," from the original Greek, also, works of Boerhaave and Sydenham from their original Latin, he was compelled in consequence of there not being, at that time, a medical college in America, to go abroad to complete his medical education. So, in 1766 he went to Edinburgh, under the tutorship of Dr. Cullen. After two years of close study in that institution, he took his medical degree. Remaining nearly a year in the London hospitals, he returned to Philadelphia, and entered at once upon busy, and successful practice. Soon, however, he was appointed to the chair of Chemistry, in the medical college of Philadelphia; (this being at that time the only medical college in America, and about two years old), and a few years later to the chair of Theory and Practice which he retained until his death in 1813. He remained in the Medical College of Philadelphia, and taught medicine 44 years.

Dr. R. was the discoverer of, and first to teach the true

pathology of the dropsies. The treatment of hydrocephalus was greatly advanced by his careful clinical and autopsical studies. To Rush is due the credit of separating the American medical mind from European authority; thus securing the first impulses to independent medical thought. In 1793 an epidemic of yellow fever developed in Philadelphia, which destroyed in three months four thousand lives. Rush was one of the few who remained at their posts. The courage and fortitude with which he labored in this epidemic, his efforts to establish sanitary protection of cities—the first effort ever made—against yellow fever, spread his name far and wide. “Kings and emperors sent him tokens of appreciation; learned societies of Europe sent him testimonials and enrolled him in honorary memberships; and the most famous European physicians wrote in praise of him.” As a statesman and orator, Rush excelled. He was one of the first to advocate and support American independence. As a writer he was effectual. It was he who influenced Thos. Paine to write his pamphlet entitled “Common Sense,” which did more to promote the liberty and independence of the American people, than any other single publication; and of the five physicians who signed the Declaration of Independence, Rush was one.—*Detroit Med. Journal, Feb. 1877.*

Summary of Progress in the Medical Sciences.

I. OBSTETRICS AND GYNECOLOGY.

Puerperal Fever and Septicæmia. GEORGE HUNTER, Scotland. (*Edinburgh Med. Jour.*, 1876.)

Dr. Hunter's aim is to furnish conclusive clinical evidence that puerperal fever may produce septicæmia, and that septicæmia may produce what has been termed puerperal fever. It is with reluctance that we refrain from reproducing the whole article under the head of "Selections," in another department of *THE JOURNAL AND EXAMINER*. Several cases, *ad rem*, are reported by H., which indicate unmistakably the position he defends:

The first case affected with puerperal fever was that of Mrs. A., the mother of two healthy children, who aborted on the 23d February, 1876, at the third month.

The hemorrhage was not by any means profuse, but the decidua required some rather tedious manipulation for their complete removal; and it was noticed that portions of them had an offensive odor. On the third day after parting with the uterine contents, she had a rigor, followed by severe pain over the uterine region, with nausea, frequent weak pulse, increased temperature (103°), furred tongue, and marked diminution of the lochial discharge.

From this time until March 3d, when she died, the pulse became more frequent, ranging from 120 to 140, weak and thready; the tongue sodden and bile-stained, but not altogether dry; vomiting, principally of bilious, but latterly of most offensive matter, with a slight stercoraceous fetor, severe and sustained; expression anxious, but mental faculties preserving their usual alertness; the abdomen increased in distension, with the intestinal convolutions distinct and flatus retained, until respiration became shallow and embarrassed; and then the fall of temperature, with pinched expression, coldness of the breath, forehead, and nose, and icy feeling of the extremities ushered in the fatal termination.

Mrs. Z. having been engaged to be with Mrs. A. at her confinement, came to her as nurse when she aborted, and slept in the same room, on a bed quite close to, and almost alongside, her patient. Mrs. Z. was instructed and directed to make frequent vaginal injections and vulvar ablutions, which she carried out very carefully and satisfactorily, both with Condyl's fluid and carbolic-acid lotion. She was almost in constant attendance on Mrs. A. during the night, and was seldom able to undress completely for the few hours she might be able to snatch, while her patient was being watched by some of her own relatives.

Four or five days after Mrs. A.'s funeral (11th or 12th March) Mrs. Z.

went home to her own family, which consisted of her husband, a man about 66 years of age, and an imbecile son of 18 years.

Ten or twelve days after her return, her husband exhibited symptoms of virulent blood-poisoning. These were violent rigors, followed by fever, thirst, frequent weak pulse, which soon became irregular; profuse perspirations, dry brown tongue, delirium, diarrhœa, etc.

A swelling began to form in the right axilla, which did not appear to be acutely painful, and which gradually increased to the size of a melon or cocoa-nut, at the time of his death. Some of the contents were removed by the aspirator and found to contain sanious purulent matter, serum, and tissue *debris*. The urine did not contain albumen, and there was no disease elsewhere.

"The *third* case (Mrs. G.) was attended by my assistant, Dr. Brown, on the 7th March, in her fourth confinement. Labor was easy and natural, and nothing untoward happened until the evening of the second day after delivery, when she complained of coldness of feet and shivering feelings passing up the legs and across the small of the back. Early on the morning of the third day she was seized with severe pain in the left ilio-hypogastric region, rigors, great frequency of pulse, vomiting, and other symptoms, which, with the flabby mammae and arrested or greatly diminished discharge, left no doubt in my mind respecting the dangerous, and I may say hopeless, malady with which I had to do. Death took place on the 13th March, six days after delivery, and after only four days' continuance of the more serious symptoms.

The effects to those in attendance upon Mrs. G. were most serious, and demand attention.

Mrs. X., the mother of this patient, who acted as nurse, making frequent vulvar and vaginal cleansings and injections, was seized on the fourth day after her daughter's delivery with prolonged shivering, followed by fever, sickness, great thirst, quick pulse, and acute pain from the right fore-arm to the shoulder. On the following day the right shoulder was swollen, and the supra-clavicular, subclavicular, and axillary glands were enlarged and painful. This was succeeded by alarming constitutional symptoms, with great and severe prostration. The pulse rose to 120, and was frequently irregular, the tongue dry and brown, and there was much thirst, with great mental depression and apathy. To the lymphangitis there were superadded cold shiverings (more than once repeated) and perspirations, and ultimately suppuration of the affected glands ensued. After evacuation of the large abscess which formed at the outer border of the pectoralis major, the symptoms abated, and on the 4th May she was convalescent and gaining strength rapidly. The cicatrix of a slight injury to the dorsal surface of the right index finger, which had escaped observation at the time of its infliction, was now discovered, and Mrs. X. remembered her family calling her attention to it on her return to her own house immediately after her daughter's decease. It then resembled the small blister resulting from a burn, and was filled with white matter. The resulting cicatrix was the size of a shilling.

When Mrs. X. became ill, another daughter attended Mrs. G., and performed the duties of nurse until the latter's death. Three or four days afterwards, when in town shopping, Miss X. had a rigor, accompanied with a feeling of general illness and sharp pain on the dorsal aspect of the joint between the second and third phalanges of the right ring-finger. To much constitutional disturbance succeeded increasing pain, swelling and tension of the dorsal and palmar aspects of the hand, and brawny infiltration of the fore-arm, with red lines indicating the course of the inflamed lymphatics. The local symptoms increased still more in severity, until there were uniform redness, swelling, and tension of the hand, of the fore-arm, and part of the arm, with painfully enlarged glands in the axilla. Free incisions were made over the dorsal and palmar aspects of the ring-finger and hand, which gave exit to a considerable quantity of serum and sanious pus. The lips of the wound remained gaping, in this respect resembling an incision into a piece of liver, and exactly like the incisions into the hand of Mr. Y., to whose case I have already alluded. Miss X. was now removed from the house of her sister in the country to town, when the greatest care was observed in dressing the hand antiseptically morning and evening; and, fortunately, the finger was saved, although amputation at the metacarpo-phalangeal joint, or even of part of the hand, appeared at one time to be unavoidable. Recovery was tedious, there being much vomiting, anorexia, and despondency; but on the 4th June the wounds were completely healed, some stiffness and contraction of the ring-finger only remaining.

One of the servant-maids, who had washed some of the body-linen, soiled by discharges from the deceased, next became affected. She shivered and complained of headache and feverishness, and suffered from sloughy ulceration of the tonsils, with enlargement of the submaxillary glands. She was under the necessity of leaving her situation to go to her own home, and she thus passed from my observation.

Finally, Mr. G., a healthy young farmer, much out in the open air of his upland farm, was affected with general *malaise*, ending in inflamed tonsils, which, however, terminated in resolution after a short illness."

From March 9th to April 1st, H. discontinued obstetric practice, and went into the country, exposed himself freely to the purifying influences of wind and weather. Before returning he took a Turkish bath, made a complete change of clothing, and used the nail brush more diligently, if possible, than before. On the day of his return he was called to three lying-in cases. The first two cases he reached late, and his services were scarcely needed; they made good recoveries. Let the Doctor give his own account of the third case:

"The third case, my *fourth* fatal one from puerperal fever, was that of Mrs. R., a healthy young primipara.

I used carbolic-acid for the fingers of my right hand, and took the precaution to change my coat on my arrival, having borrowed one from the husband for the occasion. In spite of all these precautions, Mrs. R. shivered on the third day, complained of pain over the uterus, and had a slight tendency to diarrhœa.

The course of her case was in every respect similar to the others narrated; but the symptoms were not quite so acute, for death did not occur until 10th April. After the third day, thinking it better and safer for my other patients, I discontinued my visits, and Dr. Baird, my former partner, very kindly undertook the care of this case.

Mrs. X., who lived near at hand, came to be with her daughter at her confinement. She was constantly in the same room with Mrs. R., and, when the latter became seriously ill, slept in the same bed. On the second day (4th April) Mrs. X., who had been very anxious about her daughter, pricked the middle finger of the left hand with a pin when removing the binder, and on the third day became suddenly ill, with shivering, vomiting, and headache. At the time of my visit, she had a pinched, earthy look, with hollow eyes, frequent pulse, and a tendency to retching and giddiness on walking. She was at once removed to her own house, and when seen the following day, she complained of pain in the left shoulder and axilla. On examination, it was found that the axillary and subclavicular glands were enlarged and painful to the touch, and that the arm and fore-arm were swollen and inflamed. Soothing lotions reduced the latter; but the glandular affection increased in severity, and, on the 11th May, a breakfast-cupful of purulent matter was evacuated from an opening at the anterior fold of the axilla, and a considerable amount also from a second opening on the inner aspect of the arm, a couple of inches above the elbow. These two openings communicated, and, on the 8th June, a drainage tube was introduced.

During the maturation of the suppuration in and around these glands, Mrs. X. was totally unable to leave her bed, and was subject to chills, followed by flushings of heat, generally ending in perspirations, which caused much adynamia. Since the introduction of the drainage-tube, and the more complete evacuation of the offensive discharge, appetite and sleep have returned, and she is now (28th June) convalescent.

A sister-in-law, who attended to Mrs. R. and the infant after Mrs. X.'s illness, and who slept in the same bed on the nights of 6th, 7th, and 8th of April, began at that time to complain of stiffness of one side of the neck when supporting Mrs. R. in bed, and, on the 10th or 11th (April), it was observed that the submaxillary glands of that side were much swollen and painful. An examination of the fauces made the nature of the case apparent; for it was then observed that there was ulceration of the tonsil, with the formation of white sloughing patches on it. Extensive suppuration of the affected glands ensued, and, on the 5th May, the abscess was freely incised, giving vent to a large quantity of healthy pus. She has not yet recovered her strength, and (28th June) still looks very anæmic.

A second sister-in-law assisted at the washing and dressing of the body of Mrs. R., and, in doing so, carelessly put one of the pins into her mouth. On the following day she assisted in washing some of the clothing of the deceased. The same evening she returned to her own home in a neighboring town, and found that her throat was affected. She was confined to the house for some time, under the care of the local medical attendant.

Soon after the infant's birth (9th April), those nursing it observed an offensive discharge from the roots of the finger-nails of both hands. Care was taken to prevent the child putting its fingers into its mouth, and a carbolic-acid lotion having been applied, it soon made a good recovery.

A *third* sister-in-law became affected soon after the opening of the abscess in her sister's neck, with swollen, inflamed, and slightly ulcerated tonsils.

Next, the husband of Mrs. R. was seized eight days after the preceding with acute tonsillitis, which, however, did not go on to suppuration, but ended in resolution.

Finally, the husband of Mrs. X., who had washed some of the bandages and rags soiled by the discharges from his wife's arm, was seized with erysipelatous redness and swelling of his right hand, near the root of the thumb, and between it and the index finger. Under the use of local discutient and sedative lotions, it gradually disappeared without leaving any bad results.

Until quite recently, it was almost universally admitted that puerperal fever was a fever *sui generis*. To-day, however, the most distinguished obstetric authorities have abandoned this theory. Dr. Hunter's cases point to the probable identity of puerperal fever with septicæmia.

II. PRACTICAL MEDICINE.

Paracentesis of the Pericardium, with an Analysis of Forty-one Cases.
ROBERTS. (*New York Med. Jour.*, December, 1876.)

Paracentesis of the pericardium, unfortunately, holds at the present time the position that was occupied by thoracentesis years ago. The operation was first proposed by Riolan, in 1649, but owing to the difficulty in making a correct diagnosis, it made but little, if any, progress until Romero's day, 1819, when it was revived. The author has collected forty-one cases which were operated on by different men, dating back to Romero in 1819, and down to Nixon in 1876. The site of operation in fifteen cases was the fifth interspace, ten the fourth, three the sixth, and two the third interspace. In the rest of the forty-one cases no seat of puncture is mentioned.

The bistoury and scissors were the first instruments used, and only three operations were made by them. The trocar came next in order, and was used seventeen times, followed by the trocar and incision six times. All these instruments of operation, however, soon gave way to the aspirator, which was first used in 1873, nine operations being made with it up to 1876. No mention is made of the instruments used on the balance of the forty-one cases reported.

Of the forty-one cases twenty recovered. Each of the fatal cases had some complication that made recovery impossible. The point of puncture should be in the fifth interspace, about midway between the left nipple

and sternum, penetrating directly backward. The dangers to be most dreaded are wounding the internal mammary artery, and striking the heart as it is thrown forward by the systole; but by tapping at the point mentioned the artery is avoided, because of its situation, being about one-half or one-quarter of an inch from edge to sternum. Injury to heart could be avoided by attaching the exhausted air chamber of the aspirator to the needle as soon as it is buried beneath the skin.

The author stoutly maintains that the operation is fraught with no danger to patient, and should be made even though grave complications are present; believing that life is prolonged in the most hopeless cases, and that a cure will follow where there is no complication.

He concludes by denouncing the let-alone treatment, and says that the fluid should be removed as soon as the sac becomes filled. W. F. L.

Scarlatina Complicated with Typhlitis; Fatal on the Seventh Day. STEDMAN. (*The Boston Med. and Surg. Jour.*, December, 1876.)

Dr. B., house physician, city hospital, while attending scarlet fever cases in one of the isolated wards was stricken down with all the symptoms of scarlatina well developed.

December 5, fourth day of illness, occurred a general amelioration of the more severe symptoms, promising a speedy recovery; however, during the afternoon of same day (5th) these promises were dissipated by colicky pains around the umbilicus and in right iliac regions, making all motion of body painful.

December 7. Pain had located entirely in right iliac and hypochondriac region.

December 8. Patient's condition greatly embarrassed by hiccup, eructations and vomiting.

At 11:20 of the same day (8th) he died.

Autopsy twelve hours after death. Small quantity of purulent fluid in peritoneal cavity, also indications of recent inflammation of portion of peritoneal covering, having its origin at the appendix cæci, and slightly extending over most of right side of abdominal cavity. The appendix was adherent, much enlarged, thickened, and contained oval concretions slightly larger than a cherry stone; small intestines just above cæcum contained four or five hard yellow masses, with fæcal odor, resembling curdled milk. The kidneys were enlarged, and their cortical portion was cloudy, with slight redness of the cones.

Dr. S. concludes by saying that at the age of eight years the patient had scarlatina. W. F. L.

Sulpho-Carbolate of Sodium in Diphtheria. ANTHONY. (*The Med. and Surg. Reporter*, January, 1877.)

During the past three months Dr. A. has treated eighteen cases of true diphtheria successfully, save one, with sulpho-carbolate of sodium. His usual way of administering the remedy to children is to mix it with sugar and let them eat it. The dose is from one to ten grains, repeated every

one, two or three hours. It may be combined with quiniæ sulph., tinct. ferri mur., ammoniæ carbon., or given in brandy, whisky, wine, syrup, or any aromatic water.

W. F. L.

Aphonia of Ten Months' Duration from Paralysis of the Arytenoideus Proprius Muscle, with Concomitant Heart Disease; Voice Restored by the Direct Application of Electricity to the Vocal Cords. BEVERLEY. (*The American Jour. of the Med. Sciences*, Jan., 1877.)

In 1872, a lady 42 years of age, was exposed to cold, from which she lost her voice; remaining in this condition for three months, her voice spontaneously returned. Three years later (1875), her voice again disappeared, apparently from the effects of cold. Not returning this time, she consulted a physician, who pronounced it functional aphonia, and made local applications of faradic current to the throat, without effect.

May 25th, 1876, Dr. B. was called to attend patient. In connection with the faradic current to the arytenoideus muscle, which was continued every other day until June 15th, 1876, he gave strychnia 1-30 gr. three times daily. Under this treatment she improved, and in a few days was able to speak in a very good tone of voice.

Her condition rapidly improved, until she completely recovered her voice. (We are not told by the author, whether the treatment was continued with the same regularity, as from the beginning, during his attendance upon her.) At the time of first visit, patient complained of pain in left mammary region, and on pressure it was greatly augmented. Percussion and auscultation revealed some enlargement of heart, and a distinct bruit at base accompanying first sound. The author believes that, the loss of voice was due chiefly to hypertrophy of left ventricular walls; the increase of abnormal tissue, making pressure on nerve structure, resulted in reflex paralysis of one of the intrinsic muscles of larynx, effected through certain motor fibres of either vagus.

W. F. L.

Rupture of the Healthy Œsophagus. FITZ. (*The American Jour. of The Med. Sciences*, Jan., 1877.)

A gentleman, 31 years of age, merchant, while eating, became strangulated by a tough piece of meat, about an inch in length, by one-half inch in width. After remaining in this condition about an hour, he succeeded, by great muscular energy, in ejecting it. Large clots of clotted and liquid blood were immediately expelled; this was soon followed by tumefaction of left side of neck, just below angle of lower jaw; a corresponding swelling of opposite side of neck soon followed, with prostration to patient. Liquids were swallowed without annoyance. He died on the seventh day. Autopsy showed a large longitudinal rent of œsophagus, situated in front and to right, at and below bifurcation of trachea, its length about two inches, and extending through all the coats.

W. F. L.

Sleeping Disease. CORRE. (*Jour. de Méd. et de Chirur. prat.*, Jan., 1877.)

Hitherto this disease has only been recognized in the negro race. The patients, at first, present a peculiar tendency to sleepiness; they become taciturn, lose appetite, and are gradually enfeebled. Finally, the tendency to sleep becomes invincible and continued. Even when awakened the affected return at once to the condition of sleep. General intelligence is fairly preserved and delirium only supervenes exceptionally. In some cases convulsions, contracture and trembling result. There is concurrent fever, especially in the evening, but without regular accesses. The issue is generally fatal, in consequence of the progressive debility. The lesions discovered are quite variable. Most frequently there is softening of the cerebral tissue, and congestion of the meninges, but as an exception, it may be noted that the cerebral substance has been found in a normal condition, with anæmic membranes. The author calls attention to two points of etiological interest: 1. The frequency of the disease in certain definite regions, such as Western Africa, Senegambia, etc. 2. The predilection of the disease for the blacks. It has, accordingly, been considered as one of the manifestations of paludal intoxication, and it would seem to be the only manifestation of such a condition in the negroes who, as is well known, possesses a certain immunity against impaludism. Corre, however, considers this hypnosis to be due to a slow intoxication, resulting from the alimentation of the negro in those latitudes—his food consisting largely of rice, maize, etc. If this latter factor could not be demonstrated as efficient, we should perhaps refer the disease to the profoundly depressing influence of a nostalgia, much more active among the blacks than is commonly supposed to be the case. Other authors have concluded that the disease resulted from a form of encephalitis. M. Ulecia, as the result of his observations in Cuba, believes that the disease is an ischemic neurosis, and that the functional trouble is due to perverted innervation, produced by alteration of the blood.

Inoculability of Tubercle. METZQUER. (*Lyon Médical*, No. 23, Dec. 3, 1876.)

An interesting paper upon this subject was read by the author before the Paris Academy of Medicine. His conclusions were that tuberculosis is not a specific disease, and is not inoculable. The so-called ganulations produced by inoculation are simply infarctus, resulting from primary or secondary embolism. They are produced at the site of inoculation, either by admission to a veinule or lymphatic capillary. The solid particle, transported to the lung, may become there implanted and give origin after a fashion to a tuberculous lesion. Ordinarily, however, we find merely clots in a retrogressive phase. If the animal be permitted to survive for a time, these purely inflammatory lesions do not fail to disappear. It is only by destroying animals at periods more or less remote from the date of the experiment, that the production of the phenomena described can be properly studied.

III SURGERY.

Necrosed Nasal Bones Swallowed and Impacted in the Œsophagus. DR. M. LANGENBECK. (*Memorabilien*, XXII., 1.)

A woman, aged forty years, who four years since had syphilitic caries of the nasal bones, one morning woke up and could not swallow. Though the patient was not aware of having swallowed a hard substance, the œsophagus probe was arrested in its progress, midway between the pharynx and stomach, by a hard body so firmly impacted, that it baffled all attempts at extraction, by various instruments. The patient unable to swallow water, was fed by enemata; but after twenty days it became evident that she would soon succumb from inanition. The doctor then made another attempt at extraction; he introduced a long, slender whalebone, which tapering off toward the end, carried a small, conical bulb. After manipulating about half an hour, the bulb slipped down below the foreign body, and the latter finally began to move when cautious tractions had repeatedly been made with the bulbous end of the whalebone. No sooner was the foreign body dislodged, than it was thrown up by vomiting. It proved to be a conglomerate of the necrosed nasal bone, vomer and both the inferior turbinated bones which the patient must have swallowed in her sleep.

Pulsating Tumor of Orbit resembling True Aneurism; Ligation of Common Carotid; Subsequent Removal of Tumor; Recovery. FROTHINGHAM. (*The American Jour. of the Med. Sciences*, January, 1877.)

A pulsating tumor of orbit, of three years' standing, occurred in a lady aged thirty-five years. On tactile examination the eye moved perceptibly with each pulsation; and upon compressing the common carotid the bruit ceased, and the tumor, with slight pressure with the finger, would recede in the socket. The eye was very much protruded, and the sight greatly impaired. Later in the month (March, 1872,) Prof. T. A. McGraw saw the case with Dr. F., and diagnosed true aneurism of the orbit. In May—three months later—the common carotid was tied, tumor diminished in size, bruit and pulsation ceased for fourteen days, when it returned, but not with so much force. On the eighteenth day the ligature came away; patient making a slow recovery from the effect of operation. Ligating the artery so greatly retarded the growth of the tumor that not until November 3, 1875, did it become urgent for a second operation.

Diagnosis having been changed from a true aneurism of orbit to aneurism by anastomosis, excision of tumor was advised and made. The excised mass consisted of sacculated vessels, held together by connective tissue, and resembling in appearance a sponge.

Dr. F. believes that there is a general tendency on the part of surgeons to regard all deep-seated pulsating tumors of orbit true aneurisms; and not until a more complete diagnostic distinction is arrived at can mistakes be avoided.

W. F. L.

Method of Retention of Umbilical Hernia at an Early Age. ARCHAMBAULT. (*Jour. des Conn. Méd-Chir.*, September 1, 1876.)

Very young infants affected with umbilical hernia are generally dressed with a button pad and bandage, held *in situ* by a circular spring. This has the obvious disadvantage that the button rarely remains in coaptation with the umbilical depression, and the consequence is that the remedy becomes worse than the evil.

A simpler method, requiring no bandaging, has been devised by the author. A piece of softened white wax is moulded between the fingers until it has the shape and size of a small ball. It is then divided so as to form two hemispheres. One of these hemispheres, in size proportioned to the extent of the umbilical depression, is engaged by its spherical surface in the depression, and retained in position by a strip of diachylon plaster. Instead of the wax, a bit of gutta-percha may be employed, previously softened in warm water.

Whichever substance is employed the effect produced is the same; at the end of two hours the obturating body is sufficiently softened to adhere firmly to the skin. After that no bandage is necessary to hold it in place. By this simple and inexpensive expedient the cure is effected in less than two months.

If the plaster occasions a cutaneous erythema, it may be replaced every second day, after the surface has been well dusted with rice powder.

The Gunshot Wounds of the Ankle Joint during the Franco German War. GROSSHEIM. (*Deutsche Militäerarztl. Zeitschr.*, 1876, No. 4; *Centralbl. f. Chir.*)

The author could give a pretty complete report of those cases which were submitted to operations, while the record of cases treated by the conservative method is very deficient.

The total excision of the ankle joint (*i. e.*, the removal of the articular ends of the tibia, fibula and astragalus,) was recorded fifty times, with twenty-six recoveries, twenty deaths, and four unknown results. In nine cases the leg had to be amputated afterward; two of these patients recovered and seven died. The result of the successful operations was a complete ankylosis, with a shortening of the leg varying between two and fifteen centimetres. In four cases the foot could not be used in walking.

The partial excision (*i. e.*, the removal of the articular end of either the tibia or the fibula or the astragalus,) was executed in forty-seven cases, with thirty-three recoveries and fourteen deaths. Secondary amputation became necessary in two cases, one of which died. The shortening varied from 2 to 10.5 centimetres. The functional result in the thirty-two cases: three patients had good, active motion in the joint, and could walk well with the foot; twenty-five patients recovered with ankylosis, but had a more or less good use of their foot, while three patients could not use the foot at all.

Pirogoff's operation was recorded twenty-nine times, with thirteen deaths; *Syme's operation* was performed fourteen times, with five deaths; *amputation of the leg* was performed one hundred and forty-five times, with sixty-one deaths.

Treatment of Gunshot Wounds of the Elbow Joint in the Franco-German War. DOMINIK. (*Deutsche Militäerärztl. Zeitschrift*, 1876; *Centralbl. f. Chir.*)

For this paper the author has collected from the official lists all the wounds of the elbow joint treated in the military hospitals established during the last war. He also gathered from the medical journals all those cases of excision of the elbow which were treated in other quarters during the war, and consequently were not contained in the official lists. By this labor the author believes he has obtained nearly a complete list of all the operations performed on the elbow joint by German surgeons in the German hospitals. As to the ultimate result of the treatment, the author's information is mainly drawn from the examinations of the invalids at the pension office during the years 1871 to 1873. In regard to French soldiers, he gathered some valuable information from Chenu "Aperçu historique statistique et clinique sur le service des ambulances et des hôpitaux pendant la guerre de 1870-1871." In this way the author succeeded in obtaining information of the ultimate result in 263 cases of excision of the elbow.

1. The *conservative treatment* of the gunshot wounds of the elbow during the wars from 1848 to 1866 shows an aggregate mortality of 46.8 per cent., the excision 21.1 per cent., and the amputation 33.3 per cent. During the last war the results of the conservative treatment were far better because the lighter lesions only were put under this treatment, and whenever any untoward symptoms appeared, secondary excision or amputation were performed. For these reasons but fifty-one cases could be collected which were conservatively treated to the last, of which 5—9.8 per cent. died.

In a table, the writer classifies the functional results of 163 cases of gunshots of the elbow, treated conservatively during modern wars: Free mobility in 10 cases (mostly flesh wounds, without lesion of the bones); incomplete ankylosis in 18 cases; complete ankylosis in 133 cases; result unknown in 2 cases.

The 133 cases of complete ankylosis were divided in: 1, hand and fingers could be used in 12 cases; 2, hand and fingers were paralyzed in 49 cases; 3, functions not stated in 72 cases. From all this, the author concluded that the conservative method, though generally applied to the milder lesions, did not yield a favorable result. It almost invariably terminated with ankylosis.

2. The *excision of the elbow* for gunshot wounds was performed in 400 cases, with 90 deaths; pyemia and septicemia, 68; trismus, 1; diphtheria, 3; gangrene, 1; erysipelas, 1; pneumonia, 3; exhaustion, 2.

The ultimate result noted in 263 cases, was as follows:

Good, active motion of elbow joint, in 28 cases;

Limited motion of elbow joint, good use of hand, in 35 cases;

Ankylosis (without further data), in 43 cases;

Ankylosis, good use of the hand, in 55 cases;

Ankylosis, paralyzed hand, in 31 cases;

Incomplete ankylosis, paralysis of hand, in 6 cases;

Loose joint, useful hand, in 24 cases;

Loose joint, no use of hand, in 41 cases;

As to the bone excised, the statistics of the writer tend to prove that the best functional results are obtained by the excision of the epiphyses of the fore-arm, while the epiphysis of the humerus is preserved. The excision of one bone of the fore-arm is most frequently followed by ankylosis, while the excision of the end of the humerus is the most frequent cause of a dangling arm.

3. *Amputation of the arm* for gunshot wound of the elbow joint. The writer compiled 137 cases of this operation, with 48 deaths, and 167 cases of the same operation for other injuries, with 53 deaths. The mortality of the amputations performed on the first day, was 22 per cent.; on the second day, 55 per cent.; from third to sixth day, 26 per cent.; and later than the first week, 39 per cent.

IV. OTOTOLOGY.

A New Method of Treating the Acute Inflammation of the Middle Ear. SAM. SEXTON. (*N. Y. Med. Record*, 1877, p. 17.)

Last September, the writer had under his care a young man who was quite deaf with catarrhal inflammation of the middle ear, and who, at his first visit, stated that, one week ago, while bathing and immersing his head under water, he felt a sharp crack in his ear, and immediately he could hear quite well, but after the lapse of two days the deafness gradually returned. As this temporary improvement of hearing had to be attributed to the pressure of the water upon the membrana tympani, the Doctor decided to try the effect of gentle pressure upon that membrane by means of condensed air. For this purpose he devised a simple instrument, consisting of a soft rubber bulb, connected by a flexible tube to a hard rubber nozzle, which is somewhat olive-shaped and adapted to fit into the entrance of the external auditory meatus. When used, the nozzle is held to the ear by the left hand, and pressed against the opening with sufficient force to make the fitting as nearly air-tight as possible; while the bulb is held in the right hand, to be manipulated as desired. When using the instrument, it is of course never to be forgotten that the membrana tympani is ordinarily never stimulated to action by a greater force than the wave pulses of the air, and that the organ of hearing may be injured by too great force. When thus carefully used, the danger of injury is not so great as by Politzer's inflation, especially in cases where the tubes are freely open. When the instrument is to be used for suction—rarefaction—for instance, to draw out a membrane much depressed, the bulb is simply collapsed by pressure of the right hand before the nozzle is applied to the ear. Upon removing the pressure of the hand, the bulb, by its own elasticity, gradually resumes its expanded condition—thus rarefying the

air in the *m. externus*. If it is desired to give the *m. t.* and ossicula motion, the bulb is alternately compressed and expanded while the nozzle is in contact with the ear.

The remark is here suggested that if the object of forcing air into the cavity of the tympanum, by means of the catheter or Politzer's experiment, is to remove secretions from that cavity, the result may be frequently of quite an opposite character, *i. e.*, the mucus of the Eustachian tubes may be driven into the tympanic cavity.

If the contents of the tympanum be of such consistence as to be readily driven out at all, it may in many instances be accomplished, to some extent, by pressure upon the *m. t.* from without.

In infancy and childhood, the difficulties in the way of using the catheter, or Politzer's experiment, are only too well known. But the cavity of the *t.* may be freed in some measure by pressure from without. My experience is that it always relieves the pain which results from inflammation and the accumulation of serum in the *t.*, where the most free nervous distribution is to be found.

Adhesions can in no other way be so well prevented, or broken up when formed; for the movement of the *m. t.* may be kept up when other means cannot be resorted to. The extent to which this movement can be carried with benefit is considerable; and when we observe a *membrana tympani* so concave that it touches the promontory of the *t.* in one case, or is bulged out by secretions in another, we can judge somewhat of the capacity of these parts for tension without injury. Sometimes the ear is too painful or tender to permit the application of the instrument; its use then is not to be thought of; but the inflamed *membrana* can be acted upon in most cases without pain or injury.

It is not unlikely that the frequent (daily) pressure upon the *m. t.* in many cases may excite the movement of serum along the *e. t.* towards the pharynx, and thus keep the *t.* free of hurtful collections. That this is the natural outlet for the secretions of the *t.* cavity, there can be no doubt. When tinnitus aurium depends upon the adhesions between the malleus and *m. t.*, and between the ossicula and the stapes and fenestra ovalis, may not much benefit arise from exercising, as it were, this mechanism?

The air forced into the *t.* cavity through the Eustachian tubes does not perform this so well, and cannot be done with the same ease and gentleness.

The frequency of the applications must be determined by the results as derived from experience.

The congestion of the *m. t.* is not as marked after this operation as is sometimes the case after syringing—usually, there is none. The hearing power in nearly all cases of deafness will be increased in as great a degree as by any other means we are acquainted with, and in many instances benefit is found where other means do not avail. I am aware that many otologists have made valuable suggestions as to the use of condensed and rarefied air, but I believe none have recommended its use, in acute aural catarrh, in the manner here indicated.

Nitrate of Amyl in Tinnitus Aurium. MICHAEL. (*Arch. Ophthalmol. and Otol.*, vol. v., 4.)

In many diseases of the ear, the tinnitus is the symptom which causes the patient more annoyance than the impairment of the hearing; and in a large number of cases it does not subside with the disappearance of the causative disease. Dr. Michael, of Hamburg, has tried the nitrate of amyl for the relief of the tinnitus. He was led to employ this remedy on account of its well-known sedative action upon the sympathetic system, especially the vaso-motor nerves, and the fact that many forms of tinnitus are caused by an irritative state of the auditory nerve, or are the result of hyperæmia, or anæmia of the brain, or the internal ear.

He administered the nitrate of amyl in twenty-seven cases. The results were as follows: A greater or less degree of improvement was obtained in nineteen cases. Among these were three in which the tinnitus disappeared entirely from one ear and was diminished in the other ear. In four cases, a by no means inconsiderable improvement of the hearing was observable. Three cases passed from observation. In the majority, there was an otitis media hypertrophica; of the cases not improved, one; and of those improved, two were diseases of the labyrinth.

From one to five drops were inhaled at a sitting. The inhalation was continued during the appearance of the usual symptoms (flushing of the face, injection of the blood vessels of the eye), and suspended on the occurrence of vertigo. In all the cases improved, the tinnitus was increased during the period of inhalation. As the flushing of the face disappeared, the tinnitus diminished and became less than before the administration. In some cases the improvement lasted but one hour; in others, several weeks, but usually from two to ten days. The effect of a second inhalation lasted longer than that of the first application, provided it did not follow the latter too soon; an interval of two days at least must be allowed. The remedy, of course, is not appropriate for acute catarrhal cases, or others in which the tinnitus is evidently of a mechanical origin.

A New Artificial Membrana Tympani. L. TURNBULL. (*Phil. Med. and Surg. Rep.*, Dec., 1876.)

The modifications suggested by T. consist in making the stem of steel, and covering it with a thin layer of rubber; at the end of this stem is a light metal ring, bearing stretched across it a thin rubber membrane. The advantage claimed for this artificial drum is, that the stem being attached, not to the centre, but to the circumference of the membrane, the latter can respond better to the impulses of the waves of sound and convey their whole intensity to the inner ear.

On the Diagnosis of the Anomalies of the Conduction of Sounds in the Ear. PROF. GRUBER. (*Allg. Wiener Med. Ztg.*, 1877, No. 7.)

The conduction of the sounds may, among other causes, be disturbed by an irregular tension of the membrana tympani. An abnormal relaxa-

tion, or an excessive tension of this membrane must interfere with the normal function of the organ of hearing. The relaxation of the membr. tymp. (or of a portion thereof), can be diagnosed by inspection. If the patient forces air into his ear by the Valsalvian experiment, while we are looking at the illuminated drum-head, we can plainly see the membrane make a decided outward movement. In several such cases, it was also ascertained that the hearing was decidedly improved after the experiment (*i. e.*, after the membr. tymp. had obtained a better tension), but that this improvement gradually disappeared again when the membrane returned to the former relaxed state.

The opposite condition of the membrana tympani, its increased tension, in many cases, cannot be ascertained by ocular inspection, because we have no efficient means of relaxing an abnormally tense drum-head. In this case, the tuning fork proves to be of great value.

A few years ago, Gruber found that the tone of a tuning fork held opposite the external meatus, grew fainter when he inflated his middle ear by the Valsalvian experiment, and thereby increased the tension of the membrana tympani; and as soon as the inflation was discontinued and the membrane returned to its natural condition, the tone of the fork became louder again. Consequently, if to a patient the sound of the fork held opposite his ear does not decrease in intensity during, and again increase after, the Valsalvian experiment, we can infer that, the tension of his membrana tympani has not been increased by the inflation of air, because it has before already been abnormally great. This experiment, however, is not free of errors, because we are wholly dependent upon the patient's statements, and his capacity of making correct observations. These statements must, therefore, be controlled by another test. For this purpose, the tuning fork is placed on the middle of the forehead, and again the patient makes the Valsalvian experiment.

Where no abnormal tension existed in the membr. tymp., the patient will hear the sound of the tuning fork better during the experiment, because the waves of the sound that have been conveyed through the bones of the skull to the air of the middle ear are reflected back on the membr. tympani, while its tension has temporarily been increased by the inflation. As soon as this artificial tension is reduced by the cessation of inflation, the waves of sound which have reached the middle ear are no longer reflected, but pass out through the normal membr. tymp. to the air of the external meatus; the patient then hears the sound considerably fainter. In case of an excessive tension of the membrane the intensity of the sound of the tuning fork put on the head will not be materially altered by the inflation of the middle ear, because it does not materially change the tension of the membr. tympani. Thus, by this double test with the same instrument (tuning fork), and during the same experiment (Valsalva's inflation) the patient receives, apparently, conflicting impressions, according to whether the tuning fork is held opposite his ear or put on his head.

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS. SOCIETIES.

Mondays, April 2 and 16.—Chicago Medical Society. Regular meetings.

Mondays, April 9 and 23.—Chicago Soc. of Phys. and Surgeons. Regular meetings.

CLINICS. Every Monday.

At Eye and Ear Infirmary—2 P. M.—Prof. Holmes.

At Central Dispensary (Wood and Harrison sts.)—2 P. M. *Gynecological*, Dr. Adolphus;

3 P. M. *Diseases of Children*, Dr. R. S. Hall.

At Mercy Hospital—2 P. M., *Surgical*, Prof. Andrews.

At Rush College—2½ P. M., *Medical*, Dr. Bridge.

At Chicago College—2 P. M. *Gynecological*—Prof. Merriman.

LECTURES. Every Monday.

At Rush Medical College (Harrison and Wood sts.)—9 to 1 o'clock, Drs. Wadsworth, Jackson, Danforth and Knox. At Chicago College—8 to 11, Profs. Rutter, Jewell, and Curtis; 3½, Nelson.

TUESDAYS. SOCIETIES.

Tuesday, April 10.—Academy of Science. Regular meeting at 8 P. M. (263 Wabash av.)

CLINICS. Every Tuesday.

At Eye and Ear Infirmary—2 P. M., Prof. Jones.

At County Hospital—2 P. M., *Medical*, Prof. Bevan. At 3 P. M., *Surgical*, Prof. Bogue.

At Mercy Hospital—2 P. M., *Medical*, Prof. Hollister.

At Chicago College—2 P. M., *Gynecological*, Prof. Roler.

LECTURES. Every Tuesday.

At Rush College—9 to 1, Drs. Owens, Bridge, Strong and Case. At Chicago College—9 to 11, Profs. Jewell and Byford.

WEDNESDAY. CLINICS. Every Wednesday.

At County Hospital—2 P. M., *Ophthalmological*, Dr. Montgomery; 3 P. M., *Gynecological*, Prof. Fitch.

At Chicago College—3 P. M., *Gynecological*, Prof. Nelson.

At Mercy Hospital—2 P. M., *Ophthalmological*, Prof. Jones.

At Central Dispensary—2 P. M., *Surgery*, Dr. Loomis; *Diseases of Chest*, Dr. Ingals; 3, *Gynecological*, Prof. Etheridge.

LECTURES. Every Wednesday.

At Rush College—9 to 1, Drs. Wadsworth, Ingals and Sawyer. At Chicago College—9 to 11, Profs. Hyde and Steele; 3½, Andrews.

THURSDAYS. CLINICS. Every Thursday.

At Eye and Ear Infirmary—2 P. M., Prof. Hotz.

At Mercy Hospital—2 P. M., *Medical*, Prof. Davis.

At Rush College—2 P. M., *Medical*, Prof. Ross; 3 P. M., *Diseases of the Nervous System*, Prof. Lyman.

At Chicago College—2 P. M., *Gynecological*, Prof. Merriman.

At Central Dispensary—2 P. M., *Surgical*, Dr. Graham.

LECTURES. Every Thursday.

At Rush College—9 to 1, Drs. Hayes, Bridge, Strong and Case. At Chicago College—9 to 11, Prof. Quine and Steele; 3½, Davis or Johnson.

FRIDAYS. SOCIETIES.

Friday, April 13.—State Microscopical Society of Illinois. Regular meeting, 8 P. M.

CLINICS. Every Friday.

At County Hospital—2 P. M., *Medical*, Prof. Bevan; 3 P. M., *Surgical*, Prof. Bogue.

At Mercy Hospital—2 P. M., *Medical*, Prof. Davis.

At Chicago College—2 P. M., *Gynecological*, Prof. Roler.

At Central Dispensary—2 P. M., *Diseases of Chest*, Dr. Harroun; 3 P. M., *Dermatological*, Dr. Maynard.

LECTURES. Every Friday.

At Rush College—9 to 1, Drs. Wadsworth, Jackson, Strong and Knox. At Chicago College—8 to 11, Profs. Jones, Hyde, and Curtis; 3½, Bond.

SATURDAYS. CLINICS. Every Saturday.

At Chicago College—2 P. M., *Surgical*, Prof. Andrews or Isham; *Gynecological*, Prof. Nelson; 3 P. M., *Medical*, Prof. Johnson.

At Rush College—2 P. M., *Surgical*, Prof. Gunn.

LECTURES. Every Saturday.

At Rush College—9 to 1, Drs. Owens, Bridge, Sawyer and Danforth. At Chicago College—8 to 11, Profs. Merriman, Quine and Byford; 3½, Hollister.

At all the above named Clinics visiting regular practitioners are, we believe, admitted.

At the South Side Dispensary (Chicago College) there are six daily special Clinics, for sections of the classes of the Chicago College.

The Spring Course of Rush College begins March 7th. The Winter Course of the Chicago College ends March 20th.